

From: Howard, Leslie Ann CIV USN BRAC PMO SAN CA (USA) [leslie.howard@navy.mil]
Sent: Thursday, August 13, 2020 3:21 PM
To: Janda, Danielle L CIV USN (USA) [danielle.janda@navy.mil]; Stoick, Paul T CIV USN NAVFAC SW SAN CA (USA) [paul.stoick@navy.mil]; Liscio, Matthew P CIV USN NAVSEA DET RASO VA (USA) [matthew.liscio@navy.mil]
Subject: FW: Dutra Soil Data Package
Attachments: HPNS Imported Soil Assessment Memo-DP4-Dutra-200813-Final.pdf

We got the data!

I will review and forward to the BCT later today.

Thanks!

Leslie

Leslie A. Howard, CHMM
Remedial Project Manager
Navy BRAC PMO West
33000 Nixie Way
Bldg 50, 2nd Floor
San Diego CA 92147
Desk Phone: 619-524-5903
Main Office Phone: 619-524-5096

From: Lou Ehrhard <lehrhard@kemron.com>
Sent: Thursday, August 13, 2020 2:29 PM
To: Howard, Leslie Ann CIV USN BRAC PMO SAN CA (USA) <leslie.howard@navy.mil>
Cc: Paul Wiseman <paul.wiseman@kemron.com>; Mark Roberts <mroberts@kemron.com>
Subject: [Non-DoD Source] Dutra Soil Data Package

Hi Leslie. Please find attached the revised soil data package for the soils samples collected at Decker Island July 2019 and this past June. The PAH data collected last year with the dilutions and elevated reporting limits has been replaced with the data collected this past June with lower reporting limits. Only a few of these data points marginally exceeded the comparison criteria for benzo(a)pyrene (BaP) of 330 ug/kg. These portions of the grids where we were not able to quantify concentrations of BaP below the comparison criteria are typically in the lower 10-15' below ground surface zone and will be excluded from excavation and import to Hunters Point. Figure 2 identifies the soils that are proposed for import as well as those that will be excluded from import as discussed in the Tech Memo.

As you know, we would like to get these data reviewed and the acceptable grids approved so that we may begin soil import as soon as possible. Please review and feel free to contact us with any questions.

Thanks for your help and understanding with this. We have our fingers crossed.

-Lou

**Lou Ehrhard | PG, PMP | Vice President |
KEMRON Environmental Services, Inc.**

An Employee Owned Company

3155 Blackhawk Drive

Building 599 | Fort Sheridan, IL | 60037 |
O: 847-266-1350 | Direct: 847-748-7611 |

(b) (6) | F: 847-266-3584 |

<https://no-click.mil/?www.kemron.com> | lehrhard@kemron.com | [Like us on Facebook](#) |
...protecting our environmental future.

Know Safety, No Accidents

The information contained in this email may be confidential and/or legally privileged. It has been sent for the sole use of the intended recipient(s). If the reader of this message is not an intended recipient, you are hereby notified that any unauthorized review, use, disclosure, dissemination, distribution, or copying of this communication, or any of its contents, is strictly prohibited. If you have received this communication in error, please reply to the sender and destroy all copies of the message. To contact us directly, send to postmaster@kemron.com. Thank you.

Offices:

Atlanta, GA
Charleston, WV
Chicago, IL
Marietta, OH
Vienna, VA

3155 Blackhawk Drive, Building 599
Fort Sheridan, IL 60037
Tel 847-266-1350
Fax 847-266-3584
www.kemron.com

MEMO

To: LESLIE HOWARD, NAVY REMEDIAL PROJECT MANAGER

FROM: LOU EHRHARD, KEMRON PROJECT MANAGER
PAUL WISEMAN, KEMRON PROJECT CHEMIST

CC: MARK ROBERTS, KEMRON PROJECT QUALITY CONTROL MANAGER (QCM),
LLOYD DEYOUNG, KEMRON SITE MANAGER

DATE: AUGUST 13, 2020

RE: IMPORTED SOIL SAMPLE ASSESSMENT – DATA PACKAGE #2, REVISED BASED ON ADDITIONAL SAMPLING
PARCEL E-2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

KEMRON Environmental Services, Inc. (KEMRON) collected 177 soil samples in 2019 and 113 soil samples in 2020 from the Dutra soil located on Decker Island near Rio Vista, CA for evaluation as imported soil source material at Hunters Point. Samples were collected and analyzed in accordance with the specifications and procedures established in the HPNS Parcel E-2 Sampling and Analysis Plan (SAP), December 2018 and the Field Change Request (FCR) – 2, July 1 2020 (for the 2020 samples), prepared in accordance with the Final Remedial Design Package, Specification Section 31 00 00 (RD, Navy 2014) and the Information Advisory for Imported Clean Fill (DTSC 2001). Soil samples were collected from a grid laid out on the proposed clean backfill source soil (see attached Figure 1). Soils were collected at up to three depths on the grid corresponding to excavation proposed source soil excavation depths of 0-5 feet, 5-10 feet, and 10-15 feet below ground surface (bgs).

Samples were collected July 17 through July 31, 2019 and sent to Eurofins TestAmerica (TA) Sacramento laboratory and EMSL's San Leandro laboratory for the following parameters:

- Metals by SW-846 Methods 6020/7471 (TA-Sacramento),
- Volatile Organic Compounds (VOCs) by SW-846 Method 8260 (TA-Sacramento and TA-St. Louis),
- Semi-Volatile Organic Compounds (SVOCs) including Polynuclear Aromatic Hydrocarbons (PAHs) by SW-846 Method 8270 (TA-Sacramento),
- Pesticides by SW-846 Method 8081 (TA-Savannah),
- Polychlorinated Biphenyls (PCBs) by SW-846 Method 8082 (TA-Savannah),
- Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO) by CALUFT/SW-846 Method 8260 (TA-Sacramento),
- TPH – Diesel Range Organics (DRO)/Motor Oil Range Organics (MRO) by SW-846 Method 8015 (TA-Sacramento),
- Radionuclide Parameters (completed by TA-St. Louis):
 - Radium-226, Cesium-137, Cobalt-60 by EPA Method 901.1,
 - Strontium-90 by EPA Method 905,
- pH by SW-846 Method 9045 (TA-Sacramento),
- Asbestos by PLM EPA Method 600/R-93/116 Method with CARB 435 Prep (EMSL).

Due elevated reporting limits of polycyclic aromatic hydrocarbons (PAHs) in the initial sampling event (see discussion below), KEMRON conducted a re-sampling event June 17 though June 24, 2020, collecting soil samples from 113 select grid point locations. The additional samples collected were analyzed for PAHs by Pace National in Mount Juliett, Tennessee (Pace) utilizing GC/MS selective ion monitoring (SIM) analysis by SW-846 method 8270. The grid point locations and depths were selected based on total petroleum hydrocarbon (TPH) results from original sampling and analysis.

Laboratory data packages (Level 4 reports) were provided by TA and Pace, Level 1 reports were provided by EMSL, and Analytical Quality Associates, Inc. (AQA) completed stage 2B data validation on each Level 4 report. The validated results are provided in the attached tables and are summarized by parameter in the following sections:

It should be noted that the Comparison Criteria (CC) identified in the Final Remedial Design Package, Specification Section 31 00 00 contained incorrect EPA Regional Screening Limits (RSLs) using Residential values from the THQ=1.0 table not the THQ=0.1 table which should be used. The CC employed in this data evaluation includes the appropriate RSL values (THQ=0.1).

Metals

The metals results compared to the HPNS Parcel E-2 CC with updated U.S. EPA Regional Screening (RSLs) using Residential THQ=0.1 values are presented in Table 1. Several metals were detected above the comparison criteria including arsenic, barium, beryllium, nickel, and vanadium. The 95% upper confidence limit (UCL) was calculated for all metals. The 95% UCL value was below the HPNS E-2 CC for the metals with CC exceedances (and all metals). The five (5) metals with CC exceedances are presented below compared the 95% UCLs.

Metal	CC (mg/kg)	95% UCL (mg/kg)
Arsenic	11.1	10.46
Barium	314.4	180
Beryllium	0.71	0.478
Nickel	112	85.56
Vanadium	117.2	85.19

VOCs

The VOC results compared to the HPNS Parcel E-2 CC based on updated RSL values are presented in Table 2. There were no VOCs reported with detections above the CC in the 177 samples analyzed. There were four (4) samples (DUT B3 at 5 - 10', DUT B5 at 0 - 5', DUT C4 at 10 - 15', and DUT C5 at 5 - 10') where all non-detected analytes could not be reported due QC issues and were qualified X.

SVOCs

The SVOC results compared to the HPNS Parcel E-2 CC based on updated RSL values are presented in Table 3. This SVOC table has been revised to incorporate the additional soil sample PAH results completed by Pace replacing original results which were reported with elevated LODs due to the dilutions performed by TA. There were limited detections of SVOCs reported in the samples with a total of 10 exceedances of the HPNS Parcel E-2 CC for benzo[a]pyrene (BaP) of 330 µg/kg in samples identified below by location and depth:

Sample Location	Depth	BaP ($\mu\text{g}/\text{kg}$)
DUT-A1	10-15'	790
DUT-D5	10-15'	513
DUT-F1	10-15'	336
DUT-F2	10-15'	584
DUT-G2	10-15'	567
DUT-K2	5-10'	645
DUT-K2	10-15'	661
DUT-K3	5-10'	471 J
DUT-K5	5-10'	425
DUT-L5	5-10'	558 J

In addition to these BaP exceedances, the 38 remaining samples with elevated SVOC reporting limits that could not be compared the HPNS Parcel E-2 CC will be considered as exceedances of HPNS Parcel E-2 CC.

PCBs

The PCB results compared to the HPNS Parcel E-2 CC are presented in Table 4. There were no PCBs reported detected in any samples that exceeded the HPNS of 140 $\mu\text{g}/\text{kg}$.

Pesticides

The pesticides results compared to the HPNS Parcel E-2 CC based on updated RSL values are presented in Table 5. Total DDT was reported detected above the HPNS Parcel E-2 CC in one (1) samples. Total DDT was detected in the sample from location DUT B4 at 5 - 10' with a concentration of 178.2 J $\mu\text{g}/\text{kg}$ (CC = 46).

Radionuclides

The radionuclide results compared to HPNS Parcel E-2 CC are presented in Table 6. The radionuclide results were all below the criteria with the exception of Cesium-137 reported above the comparison criteria of 0.113 pCi/g in one (1) samples at 0.146 pCi/g. The uncertainty associated with this value is ± 0.089 pCi/g, which puts the activity range within the comparison criterion. It should also be noted that the remaining 176 samples were all reported non-detect at a limit of 0.07 pCi/g. The average activity for all samples is 0.07 pCi/g as determined by the Kaplan-Meier method for estimating averages. EPA Soil Screening Guidance for Radionuclides: Technical Background Document, EPA/540-R-00-005 (October 2000) identifies the Generic Soil Screening for Direct Ingestion of Soil of Cs-137 as 18.3 pCi/g.

TPH – GRO/DRO/MRO

The TPH results compared to HPNS Parcel E-2 CC are presented in Table 7. There were two (2) samples with TPH-GRO results that exceeded the comparison criteria 100 mg/kg (DUT E2 at 5 - 10' and DUT H3 at 0 - 5'). The average as determined using the Kaplan-Meier method for TPH-GRO was 4.33 mg/kg. There were no TPH DRO or MRO results reported detected above the criteria. There were nine (9) samples reported non-detect for TPH-GRO that could not be reported and were qualified X due to QC issues. The TPH results indicated limited to no impact on overall soil quality.

pH

The pH results compared to HPNS Parcel E-2 CC comparison criteria are presented in Table 8. There were 111 samples reported with pH's below the comparison criteria range of 6.5 to 8.5. The remaining 66 samples were reported with pH's between 6.5 and 8.5.

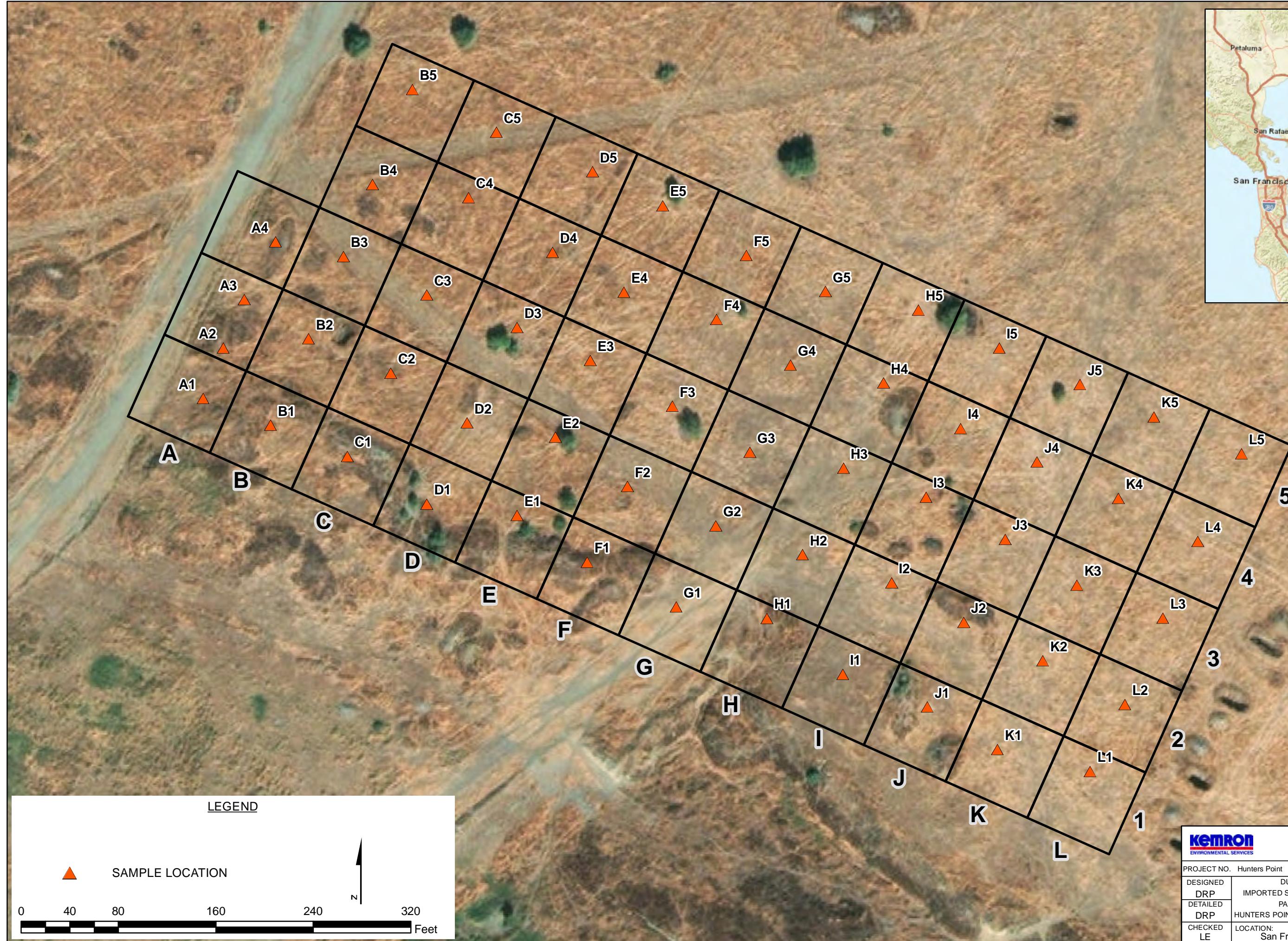
The laboratory method involves preparation of a slurry of soil in purified water to measure the pH of the soil, this approach has the potential of providing a high pH bias ("Comparison of Soil pH Method on Soils of North America", Nutrient Management & Soil & Plant Analysis, Soil Sci. Soc. Am. J. 74:310–316, January 2010). We do not consider that the reported pH results indicate a pH quality issue with the source area soils.

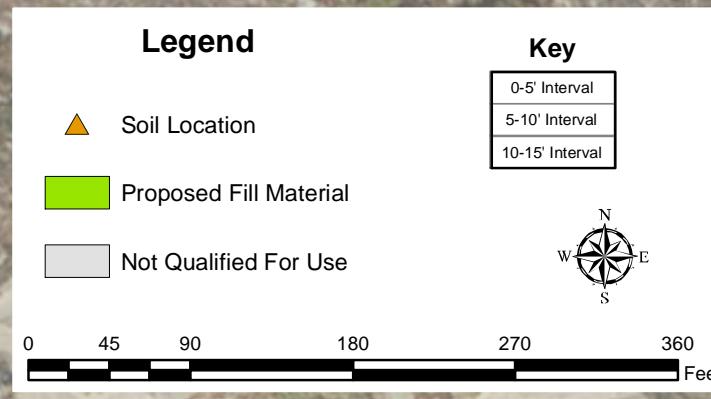
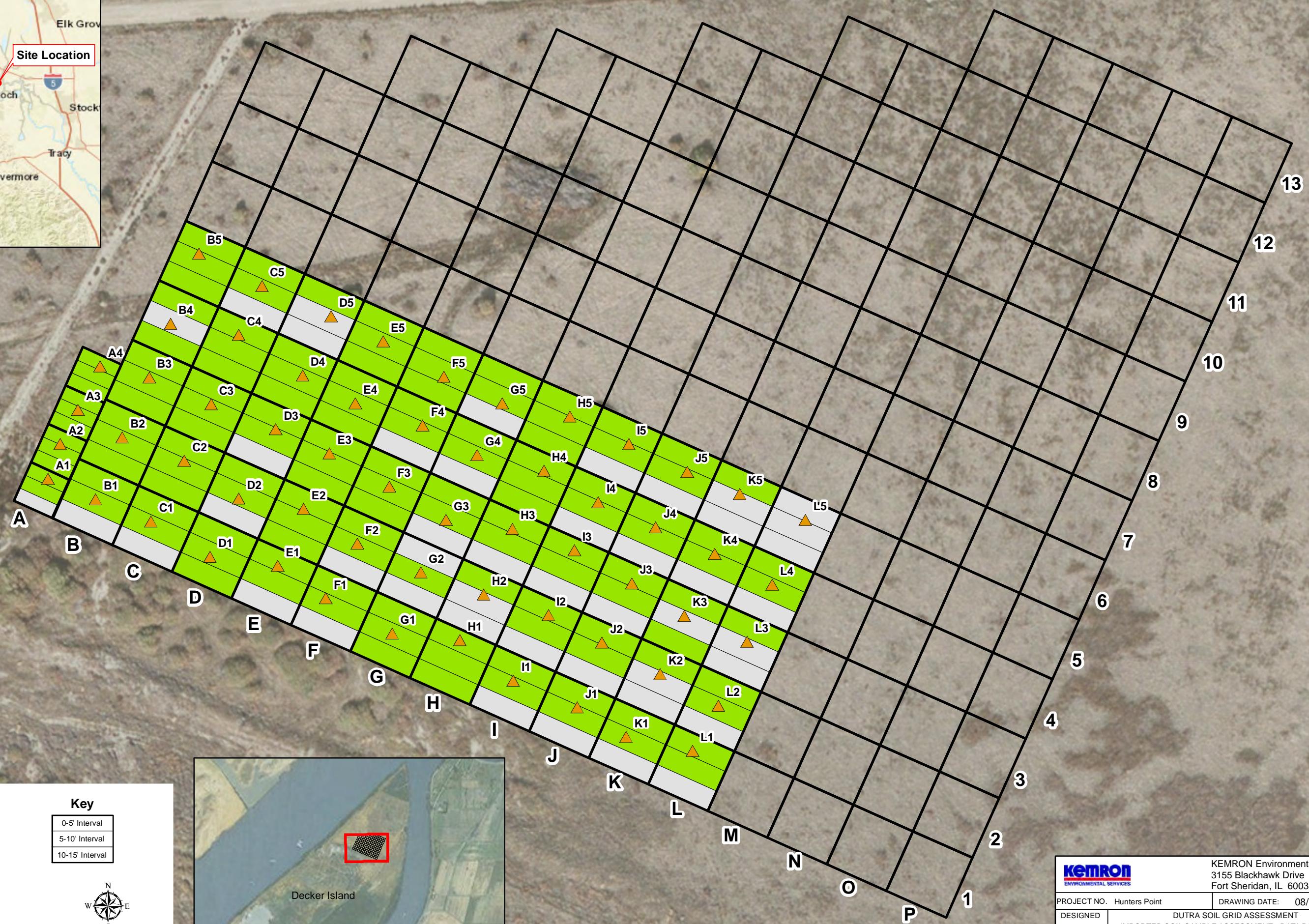
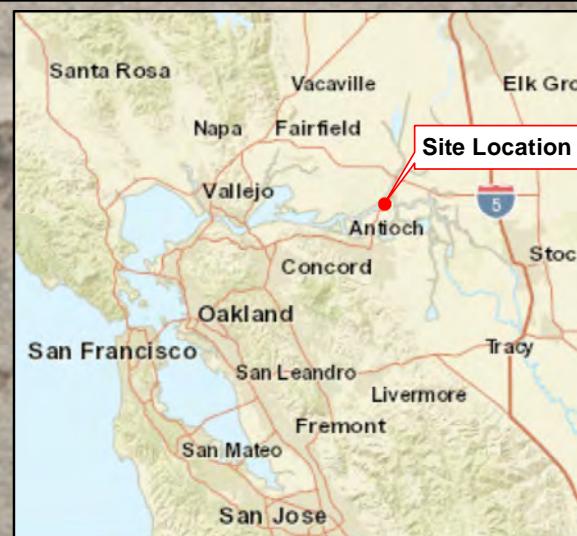
Asbestos

The asbestos results compared to the HPNS Parcel E-2 CC comparison criteria are presented in Table 7. Asbestos was reported above the comparison criteria of 0.25% in two (2) samples, 0.5% in DUT E2 at 0 - 5' and 0.75% in DUT I5 at 5 - 10'.

Summary

Based on the soil data results, the soils are consistent with results from other background soils or other sources areas for clean backfill soils. As indicated the HPNS Parcel E-2 CC has been updated to incorporate the November 2019 EPA RSL Residential values based on THQ=0.1. There are 11 grid cells with analyte results (BaP and total DDT) exceeding the updated HPNS Parcel E-2 CC and 34 grid cells that could not be fully evaluated for use due elevated SVOC report limits that will not be used for fill material at HPNS. Figure 2 presents these location identifying locations/depths that are available for use as clean fill material for import to HPNS Parcel E-2.





KEMRON
ENVIRONMENTAL SERVICES

KEMRON Environmental Services
3155 Blackhawk Drive
Fort Sheridan, IL 60037

PROJECT NO. Hunters Point DRAWING DATE: 08/12/2020

DESIGNED DRP IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2

DETAILED DRP PARCEL E2, PHASE 3 REMEDIAL ACTION

CHECKED LE HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

LOCATION: San Francisco, CA REVISION: 0 FIGURE: 2

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3	DUT A3
				Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5
					Date	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	5-10
Aluminum	77000*	23722	mg/kg	17000		22000	34000	19000	20000	21000	20000			25000
Antimony	25	0.349	mg/kg	0.41 UJ		0.49 UJ	0.43 J	0.45 UJ	0.22 J	0.44 UJ	0.46 UJ			0.31 J
Arsenic	11.1	10.46	mg/kg	7.5 J		9.6 J	17 J	10 J	10 J	8.1 J	6.6 J			12 J
Barium	314.4	180	mg/kg	200 J		220 J	210 J	370 J	200 J	200 J	210 J			200 J
Beryllium	0.71	0.478	mg/kg	0.33		0.39	0.77	0.51	0.43	0.4	0.43			0.55
Cadmium	4.2	0.558	mg/kg	0.33 J		0.4 J	1.4 J	0.65 J	0.48 J	0.46 J	0.26 J			0.75 J
Chromium	120000	81.36	mg/kg	62 J		74 J	120 J	58 J	71 J	71 J	65 J			85 J
Cobalt	76.39	18.04	mg/kg	15		18	23	20	16	17	16			20
Copper	270	62.49	mg/kg	36 J		50 J	110 J	30 J	51 J	45 J	32 J			68 J
Iron	93000	32250	mg/kg	25000		30000	43000	34000	30000	29000	27000			34000
Lead	155	15.17	mg/kg	8.2		12	23	8 J	13	11	9.8			15
Manganese	2433	579.5	mg/kg	560		500	670	2200	540	600	590			680
Molybdenum	2.68	0.64	mg/kg	0.5		0.52	1.1	1.1	0.58	0.54	0.67			0.94
Nickel	112	86.56	mg/kg	72 J		88 J	130 J	81 J	83 J	83 J	81 J			96 J
Selenium	1.95	0.396	mg/kg	0.19 J		0.26 J	0.68 J	0.3 J	0.3 J	0.26 J	0.22 J			0.46 J
Silver	1.43	0.175	mg/kg	0.095 J		0.14 J	0.25 J	0.054 J	0.16 J	0.14 J	0.077 J			0.18 J
Sodium	2300	498.5	mg/kg	430		420	650	560	440	430	530			550
Thallium	0.81	0.124	mg/kg	0.088 J		0.11 J	0.17 J	0.1 J	0.11 J	0.1 J	0.1 J			0.13 J
Vanadium	117.2	85.19	mg/kg	61		74	140	64	74	74	68			95
Zinc	410	83.94	mg/kg	63		80	140	48	83	79	59			96
Mercury	2.28	0.258	mg/kg	0.079		0.26	0.46	0.059	0.28	0.29	0.1			0.18

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

		Location ID	DUT A3	DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2	
Depth (Feet)		10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5		
Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019		
Chemical	CC	UCL95	Units								
Aluminum	77000*	23722	mg/kg	21000 J	13000 J	26000 J	32000 J	18000 J	24000 J	28000 J	17000 J
Antimony	25	0.349	mg/kg	0.48 UJ	0.41 J	0.3 J	0.42 J	0.43 UJ	0.29 J	0.33 J	0.4 UJ
Arsenic	11.1	10.46	mg/kg	7.4 J	5.7 J	11 J	17 J	5.9 J	13 J	14 J	5.6 J
Barium	314.4	180	mg/kg	170	160	210	220	190	230	210	140
Beryllium	0.71	0.478	mg/kg	0.4	0.23	0.56	0.69	0.31	0.49	0.6	0.31
Cadmium	4.2	0.558	mg/kg	0.53 J	0.2 J	0.68 J	0.9 J	0.24 J	0.59 J	0.91 J	0.37 J
Chromium	120000	81.36	mg/kg	72	54	93	100	64	86	96	63
Cobalt	76.39	18.04	mg/kg	18	13	20	23	17	19	19	16
Copper	270	62.49	mg/kg	46 J	23 J	73 J	100 J	34 J	71 J	86 J	37 J
Iron	93000	32250	mg/kg	31000	20000 J	35000 J	41000 J	27000 J	34000 J	36000 J	27000 J
Lead	155	15.17	mg/kg	12 J	5.4 J	15 J	20 J	6.9 J	16 J	17 J	9 J
Manganese	2433	579.5	mg/kg	600	260	590	720	420	660	610	490
Molybdenum	2.68	0.64	mg/kg	0.55 J	0.25 J	0.78 J	1.1 J	0.34 J	0.78 J	0.92 J	0.34 J
Nickel	112	86.56	mg/kg	92	60	100	110	83	97	110	79
Selenium	1.95	0.396	mg/kg	0.25 J	0.2 UJ	0.43 J	0.62 J	0.16 J	0.4 J	0.49 J	0.18 J
Silver	1.43	0.175	mg/kg	0.17 J	0.069 J	0.19 J	0.27 J	0.069 J	0.22 J	0.21 J	0.12 J
Sodium	2300	498.5	mg/kg	500 J	320 J	590 J	1200 J	480 J	520 J	800 J	360 J
Thallium	0.81	0.124	mg/kg	0.11 J	0.063 J	0.13 J	0.16 J	0.097 J	0.12 J	0.15 J	0.091 J
Vanadium	117.2	85.19	mg/kg	71 J	51 J	98 J	120 J	63 J	92 J	110 J	60 J
Zinc	410	83.94	mg/kg	85 J	53 J	100 J	110 J	65 J	93 J	110 J	85 J
Mercury	2.28	0.258	mg/kg	0.17	0.088	0.22	0.32	0.17	0.28	0.38	0.12

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT B2	DUT B2	DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4
				Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
					Date	7/17/2019	7/17/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	
Aluminum	77000*	23722	mg/kg	20000 J	23000 J	23000	23000	21000	17000	22000	34000		
Antimony	25	0.349	mg/kg	0.48 UJ	0.46 UJ	0.34 J	0.28 J	0.27 J	0.42 UJ	0.27 J	0.62 J		
Arsenic	11.1	10.46	mg/kg	7.8 J	9.9 J	9.6 J	7.1 J	7.7 J	4.6 J	6.7 J	17 J		
Barium	314.4	180	mg/kg	180	230	210	180	200	120	160	210		
Beryllium	0.71	0.478	mg/kg	0.37	0.44	0.43	0.4	0.37	0.29	0.4	0.74		
Cadmium	4.2	0.558	mg/kg	0.46 J	0.46 J	0.41 J	0.39 J	0.32 J	0.29 J	0.45 J	1 J		
Chromium	120000	81.36	mg/kg	71	77	72	72	67	60	72	110		
Cobalt	76.39	18.04	mg/kg	18	19	17	18	15	15	18	24		
Copper	270	62.49	mg/kg	46 J	54 J	46	42	41	28	40	92		
Iron	93000	32250	mg/kg	29000 J	32000 J	29000	31000	29000	26000	32000	43000		
Lead	155	15.17	mg/kg	11 J	13 J	12	11	10	7.2	11	23		
Manganese	2433	579.5	mg/kg	510	530	480	500	450	420	510	670		
Molybdenum	2.68	0.64	mg/kg	0.45 J	0.55 J	0.51	0.39	0.44	0.32	0.37	0.97		
Nickel	112	86.56	mg/kg	85	91	82 J	88 J	79 J	75 J	91 J	120 J		
Selenium	1.95	0.396	mg/kg	0.21 J	0.26 J	0.29 J-	0.25 J-	0.24 J-	0.16 J-	0.26 J-	0.59 J-		
Silver	1.43	0.175	mg/kg	0.14 J	0.16 J	0.14 J	0.14 J	0.11 J	0.078 J	0.13 J	0.24 J		
Sodium	2300	498.5	mg/kg	400 J	480 J	450	470	470	330	390	930		
Thallium	0.81	0.124	mg/kg	0.11 J	0.12 J	0.12 J	0.12 J	0.11 J	0.085 J	0.11 J	0.18		
Vanadium	117.2	85.19	mg/kg	72 J	79 J	73 J	71 J	68 J	58 J	71 J	120 J		
Zinc	410	83.94	mg/kg	89 J	88 J	80	84	71	77	93	130		
Mercury	2.28	0.258	mg/kg	0.3	0.28	0.22 J+	0.13 J+	0.25 J+	0.11 J+	0.16 J+	0.47 J+		

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT B5	DUT B5	DUT B5	DUT C1	DUT C1	DUT C1	DUT C2	DUT C2	DUT C2
				Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5
					Date	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Aluminum	77000*	23722	mg/kg	15000		18000	23000	23000	21000	32000	26000	23000		
Antimony	25	0.349	mg/kg	0.39 UJ		0.24 J	0.34 J	0.32 J	0.31 J	0.66 J	0.33 J	0.31 J		
Arsenic	11.1	10.46	mg/kg	4.9 J		6.1 J	8.5 J	9.5 J	8.2 J	18 J	10 J	7.9 J		
Barium	314.4	180	mg/kg	140		150	180	220	160	200	210	180		
Beryllium	0.71	0.478	mg/kg	0.27		0.33	0.46	0.41	0.44	0.74	0.46	0.43		
Cadmium	4.2	0.558	mg/kg	0.2 J		0.24 J	0.66 J	0.38 J	0.51 J	1 J	0.45 J	0.47 J		
Chromium	120000	81.36	mg/kg	58		64	80	69	77	100	75	75		
Cobalt	76.39	18.04	mg/kg	15		13	20	17	19	24	18	18		
Copper	270	62.49	mg/kg	24		33	53	43	50	110	52	47		
Iron	93000	32250	mg/kg	23000		25000	32000	30000	29000	41000	34000	32000		
Lead	155	15.17	mg/kg	5.7		8.3	13	12	13	26	13	12		
Manganese	2433	579.5	mg/kg	340		340	630	440	540	850	510	580		
Molybdenum	2.68	0.64	mg/kg	0.26 J		0.33	0.51	0.47	0.54	1.1	0.55	0.43		
Nickel	112	86.56	mg/kg	70 J		71 J	98 J	80 J	89 J	110 J	89 J	89 J		
Selenium	1.95	0.396	mg/kg	0.13 J-		0.18 J-	0.3 J-	0.24 J-	0.34 J-	0.69 J-	0.31 J-	0.27 J-		
Silver	1.43	0.175	mg/kg	0.055 J		0.097 J	0.15 J	0.13 J	0.15 J	0.28 J	0.16 J	0.16 J		
Sodium	2300	498.5	mg/kg	350		450	520	400	430	1200	410	450		
Thallium	0.81	0.124	mg/kg	0.079 J		0.088 J	0.13 J	0.12 J	0.12 J	0.18 J	0.12 J	0.12 J		
Vanadium	117.2	85.19	mg/kg	57 J		62 J	81 J	69 J	78 J	120 J	76 J	75 J		
Zinc	410	83.94	mg/kg	53		61	94	79	88	130	87	92		
Mercury	2.28	0.258	mg/kg	0.09 J+		0.11 J+	0.4 J+	0.2 J+	0.43 J+	0.2 J+	0.27 J+	0.2 J+		

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT C2	DUT C3	DUT C3	DUT C3	DUT C4	DUT C4	DUT C4	DUT C5		
Chemical	CC	UCL95	Units									
Chemical	CC	UCL95	Units	Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5
Chemical	CC	UCL95	Units	Date	7/18/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019
Aluminum	77000*	23722	mg/kg	29000	19000 J	20000 J	31000 J	28000 J	32000 J	25000 J	19000 J	
Antimony	25	0.349	mg/kg	0.43 J	0.42 UJ	0.27 J	0.52 J	0.48 J	0.66 J	0.41 J	0.24 J	
Arsenic	11.1	10.46	mg/kg	10 J	6.3 J	7.1 J	13 J	15 J	16 J	9.7 J	6.7 J	
Barium	314.4	180	mg/kg	190	180	200	210	250	210	180	170	
Beryllium	0.71	0.478	mg/kg	0.58	0.32	0.36	0.65	0.57	0.74	0.5	0.34	
Cadmium	4.2	0.558	mg/kg	0.82 J	0.25 J	0.29 J	0.87 J	0.58 J	1.4 J	0.65 J	0.3 J	
Chromium	120000	81.36	mg/kg	88	66	68	100	87	100	81 J	66 J	
Cobalt	76.39	18.04	mg/kg	20	16	15	21	19	21	19	16	
Copper	270	62.49	mg/kg	69	32	36	83	66	110	59 J	35 J	
Iron	93000	32250	mg/kg	37000	29000 J	28000 J	39000 J	35000 J	43000 J	36000 J	27000 J	
Lead	155	15.17	mg/kg	18	7.8	9.4	20	20	30	16	9.5	
Manganese	2433	579.5	mg/kg	600	430	400	640	540	670	570	410	
Molybdenum	2.68	0.64	mg/kg	0.63	0.36	0.38	0.95	0.84	1.1	0.58	0.36	
Nickel	112	86.56	mg/kg	100 J	80 J	77 J	100 J	88 J	100 J	94 J	79 J	
Selenium	1.95	0.396	mg/kg	0.42 J-	0.18 J-	0.18 J-	0.54 J-	0.45 J-	0.66 J-	0.37 J	0.22 J	
Silver	1.43	0.175	mg/kg	0.25 J	0.084 J	0.1 J	0.23 J	0.25 J	0.33 J	0.18 J	0.11 J	
Sodium	2300	498.5	mg/kg	580	440	420	630	530	530	460	410	
Thallium	0.81	0.124	mg/kg	0.15 J	0.099 J	0.099 J	0.17	0.15 J	0.19	0.13 J	0.1 J	
Vanadium	117.2	85.19	mg/kg	92 J	65 J	67 J	110 J	97 J	120 J	83 J	64 J	
Zinc	410	83.94	mg/kg	110	66	80	120	120	200	99 J	69 J	
Mercury	2.28	0.258	mg/kg	0.33 J+	0.28	0.22	0.3	0.41	0.31	0.24	0.16	

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

		Location ID	DUT C5	DUT C5	DUT D1	DUT D1	DUT D1	DUT D2	DUT D2	DUT D2	
		Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
		Date	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	
Chemical	CC	UCL95	Units								
Aluminum	77000*	23722	mg/kg	20000 J	26000 J	19000 J	21000 J	21000 J	18000 J	17000 J	30000 J
Antimony	25	0.349	mg/kg	0.23 J	0.34 J	0.3 J	0.32 J	0.3 J	0.28 J	0.22 J	0.54 J
Arsenic	11.1	10.46	mg/kg	6.7 J	8.8 J	7.9 J	8.3 J	10 J	9.1 J	6.6 J	14 J
Barium	314.4	180	mg/kg	170	160	200	190	220	200	180	210
Beryllium	0.71	0.478	mg/kg	0.37	0.54	0.4	0.43	0.41	0.42	0.33	0.67
Cadmium	4.2	0.558	mg/kg	0.4 J	0.73 J	0.35 J	0.38 J	0.43 J	0.38 J	0.25 J	0.73 J
Chromium	120000	81.36	mg/kg	69 J	84 J	67 J	72 J	70 J	65 J	63 J	95 J
Cobalt	76.39	18.04	mg/kg	19	17	15	15	17	15	14	20
Copper	270	62.49	mg/kg	39 J	62 J	43 J	46 J	44 J	40 J	34 J	78 J
Iron	93000	32250	mg/kg	29000 J	33000 J	26000 J	28000 J	29000 J	26000 J	25000 J	39000 J
Lead	155	15.17	mg/kg	9.9	15	11	12	12	10	8.2	18
Manganese	2433	579.5	mg/kg	510	530	430	420	500	410	360	640
Molybdenum	2.68	0.64	mg/kg	0.45	0.56	0.46	0.49	0.51	0.5	0.33	0.91
Nickel	112	86.56	mg/kg	86 J	88 J	78 J	81 J	81 J	76 J	75 J	100 J
Selenium	1.95	0.396	mg/kg	0.22 J	0.34 J	0.24 J	0.28 J	0.25 J	0.28 J	0.19 J	0.55 J
Silver	1.43	0.175	mg/kg	0.59 J	0.15 J	0.12 J	0.13 J	0.13 J	0.12 J	0.14 J	0.2 J
Sodium	2300	498.5	mg/kg	460	540	380	430	480	530	410	650
Thallium	0.81	0.124	mg/kg	0.11 J	0.13 J	0.1 J	0.1 J	0.11 J	0.1 J	0.089 J	0.16 J
Vanadium	117.2	85.19	mg/kg	67 J	89 J	70 J	74 J	74 J	68 J	62 J	110 J
Zinc	410	83.94	mg/kg	82 J	99 J	70 J	73 J	80 J	72 J	64 J	100 J
Mercury	2.28	0.258	mg/kg	0.43	0.23	0.23	0.24	0.33	0.2	0.14	0.54

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D4	DUT D5	DUT D5	DUT D5
				Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5
					Date	7/19/2019	7/19/2019	7/19/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019
Aluminum	77000*	23722	mg/kg	16000 J	22000 J	34000 J	18000	25000	24000	21000	17000			
Antimony	25	0.349	mg/kg	0.44 UJ	0.26 J	0.62 J	0.44 UJ	0.34 J	0.31 J	0.3 J	0.22 J			
Arsenic	11.1	10.46	mg/kg	5.7 J	6.9 J	18 J	5.9 J	9.4 J	8.7 J	10 J	5.8 J			
Barium	314.4	180	mg/kg	150	150	200	140	190	170	210	150			
Beryllium	0.71	0.478	mg/kg	0.3	0.42	0.7	0.31	0.45	0.46	0.37	0.29			
Cadmium	4.2	0.558	mg/kg	0.22 J	0.53 J	1.1 J	0.32 J	0.51 J	0.61 J	0.36 J	0.25 J			
Chromium	120000	81.36	mg/kg	62 J	74 J	96 J	63 J	81 J	80 J	67 J	58 J			
Cobalt	76.39	18.04	mg/kg	15	18	23	15	18	18	16	14			
Copper	270	62.49	mg/kg	28 J	52 J	100 J	34 J	56 J	56 J	42 J	28 J			
Iron	93000	32250	mg/kg	23000 J	30000 J	44000 J	26000	35000	34000	28000	24000			
Lead	155	15.17	mg/kg	6.7	14	23	8.7	15	15	11	7.1			
Manganese	2433	579.5	mg/kg	360	600	760	410	570	610	450	340			
Molybdenum	2.68	0.64	mg/kg	0.32 J	0.38	1	0.32 J	0.55	0.51	0.52	0.33			
Nickel	112	86.56	mg/kg	74 J	89 J	99 J	74 J	93 J	93 J	73 J	67 J			
Selenium	1.95	0.396	mg/kg	0.16 J	0.27 J	0.75 J	0.23 J	0.38 J	0.39 J	0.27 J	0.21 J			
Silver	1.43	0.175	mg/kg	0.071 J	0.2 J	0.27 J	0.11 J	0.19 J	0.21 J	0.11 J	0.076 J			
Sodium	2300	498.5	mg/kg	340	660	800	360 J	460 J	480 J	450 J	330 J			
Thallium	0.81	0.124	mg/kg	0.091 J	0.12 J	0.17 J	0.088 J	0.13 J	0.13 J	0.11 J	0.085 J			
Vanadium	117.2	85.19	mg/kg	58 J	75 J	110 J	61 J	85 J	82 J	67 J	57 J			
Zinc	410	83.94	mg/kg	55 J	90 J	130 J	74 J	89 J	97 J	77 J	58 J			
Mercury	2.28	0.258	mg/kg	0.13	0.16	0.55	0.13	0.31	0.23	0.2	0.13			

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2	DUT E3	
	Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5		
Chemical	CC	UCL95	Units								
Aluminum	77000*	23722	mg/kg	23000	17000	30000	34000	21000	29000	24000	18000
Antimony	25	0.349	mg/kg	0.31 J	0.4 UJ	1.3 J	0.35 J	0.47 UJ	0.31 J	0.34 J	0.22 J
Arsenic	11.1	10.46	mg/kg	9.2 J	5.8 J	13 J	17 J	8.1 J	14 J	8.7 J	7.1 J
Barium	314.4	180	mg/kg	160	170 J	220 J	230 J	190 J	240 J	200	170
Beryllium	0.71	0.478	mg/kg	0.41	0.3	0.63	0.75	0.4	0.63	0.41	0.32
Cadmium	4.2	0.558	mg/kg	0.51 J	0.25 J	0.98 J	1 J	0.46 J	0.88 J	0.43 J	0.3 J
Chromium	120000	81.36	mg/kg	71 J	60	100	100	73	96	79	60 J
Cobalt	76.39	18.04	mg/kg	16	14	20	19	17	21	20	14
Copper	270	62.49	mg/kg	51 J	29	93	100	44	85	54	35 J
Iron	93000	32250	mg/kg	30000	24000	38000	43000	31000	41000	31000	24000
Lead	155	15.17	mg/kg	13	7.5	72	22	12	22	12	8.5
Manganese	2433	579.5	mg/kg	450	360	680	660	550	700	540	380
Molybdenum	2.68	0.64	mg/kg	0.51	0.3	0.83	0.93	0.43	0.79	0.56	0.4
Nickel	112	86.56	mg/kg	77 J	69	100	99	85	98	95 J	72 J
Selenium	1.95	0.396	mg/kg	0.35 J	0.19 J	0.61 J	0.67 J	0.3 J	0.53 J	0.3 J	0.22 J
Silver	1.43	0.175	mg/kg	0.13 J	0.081 J	0.23 J	0.27 J	0.16 J	0.24 J	0.13 J	0.091 J
Sodium	2300	498.5	mg/kg	450 J	330 J	490 J	780 J	340 J	500 J	460	360 J
Thallium	0.81	0.124	mg/kg	0.11 J	0.089 J	0.16 J	0.17 J	0.11 J	0.16 J	0.12 J	0.094 J
Vanadium	117.2	85.19	mg/kg	76 J	57 J	110 J	120 J	72 J	100 J	79	60 J
Zinc	410	83.94	mg/kg	83 J	60	120	120	87	110	77 J-	62 J
Mercury	2.28	0.258	mg/kg	0.23	0.19 J-	0.4 J-	0.49 J-	0.2 J-	0.26 J-	0.26 J-	0.23

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5	
	Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15		
Chemical	CC	UCL95	Units								
Aluminum	77000*	23722	mg/kg	26000 J	27000 J	22000 J	25000 J	22000 J	19000	22000	28000
Antimony	25	0.349	mg/kg	0.31 J	0.39 J	0.49 UJ	0.31 J	0.22 J	0.24 J	0.47 UJ	0.33 J
Arsenic	11.1	10.46	mg/kg	12 J	10 J	7.7 J	12 J	9 J	6.2 J	7.6 J	11 J
Barium	314.4	180	mg/kg	200 J	190 J	210 J	200 J	180 J	190	180	190
Beryllium	0.71	0.478	mg/kg	0.55 J	0.51 J	0.41 J	0.5 J	0.38 J	0.37	0.42	0.63
Cadmium	4.2	0.558	mg/kg	0.65 J	0.57 J	0.38 J	1 J	0.42 J	0.28 J	0.43 J	0.77 J
Chromium	120000	81.36	mg/kg	91 J	84 J	77 J	86 J	74 J	66 J	77 J	92 J
Cobalt	76.39	18.04	mg/kg	19	18	18	20	17	17	17	18
Copper	270	62.49	mg/kg	70 J	62 J	47 J	80 J	47 J	35 J	45 J	76 J
Iron	93000	32250	mg/kg	32000 J	31000 J	29000 J	33000 J	30000 J	26000	32000	34000
Lead	155	15.17	mg/kg	16	14	11	18	11	8.8	12	17
Manganese	2433	579.5	mg/kg	650 J	610 J	560 J	650 J	480 J	380	520	570
Molybdenum	2.68	0.64	mg/kg	0.69 J	0.66 J	0.44 J	0.66 J	0.5 J	0.35	0.43	0.68
Nickel	112	86.56	mg/kg	93 J	84 J	90 J	100 J	82 J	76 J	88 J	96 J
Selenium	1.95	0.396	mg/kg	0.46 J-	0.4 J-	0.26 J-	0.44 J-	0.28 J-	0.21 J-	0.32 J-	0.49 J-
Silver	1.43	0.175	mg/kg	0.2 J	0.15 J	0.13 J	0.2 J	0.11 J	0.083 J	0.14	0.2
Sodium	2300	498.5	mg/kg	520	610	410	520	470	410 J	490 J	720 J
Thallium	0.81	0.124	mg/kg	0.15 J	0.14 J	0.13 J	0.14 J	0.11 J	0.11 J	0.11 J	0.14 J
Vanadium	117.2	85.19	mg/kg	97 J	91 J	79 J	91 J	76 J	64 J	74 J	100 J
Zinc	410	83.94	mg/kg	95 J-	80 J-	80 J-	100 J-	74 J-	65 J	82 J	100 J
Mercury	2.28	0.258	mg/kg	0.33	0.26	0.24	0.29	0.21	0.16	0.3	0.32

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3	DUT F3
				Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5
					Date	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
Aluminum	77000*	23722	mg/kg	18000		24000	24000	19000	24000	29000	20000	22000		
Antimony	25	0.349	mg/kg	0.22 J		0.34 J	0.28 J	0.42 UJ	0.26 J	0.38 J	0.24 J	0.27 J		
Arsenic	11.1	10.46	mg/kg	6.5 J		9.8 J	9.7 J	7.3 J	8.1 J	12 J	7.6 J	7.9 J		
Barium	314.4	180	mg/kg	180		210	210	200	190	190	210	200		
Beryllium	0.71	0.478	mg/kg	0.33		0.47	0.46	0.34	0.46	0.64	0.4	0.43		
Cadmium	4.2	0.558	mg/kg	0.27 J		0.44 J	0.48 J	0.29 J	0.54 J	0.72 J	0.37 J	0.47 J		
Chromium	120000	81.36	mg/kg	66 J		76 J	79 J	63 J	84 J	96 J	71 J	75 J		
Cobalt	76.39	18.04	mg/kg	15		17	19	16	20	19	15	18		
Copper	270	62.49	mg/kg	34 J		53 J	53 J	35 J	56 J	83 J	42 J	49 J		
Iron	93000	32250	mg/kg	25000		32000	32000	26000	35000	37000	28000	31000		
Lead	155	15.17	mg/kg	8.3		13	13	9.2	16	18	11	13		
Manganese	2433	579.5	mg/kg	380		490	560	400	700	540	460	520		
Molybdenum	2.68	0.64	mg/kg	0.34		0.57	0.59	0.36	0.45	0.75	0.44	0.5		
Nickel	112	86.56	mg/kg	73 J		86 J	87 J	73 J	100 J	100 J	80 J	89 J		
Selenium	1.95	0.396	mg/kg	0.22 J-		0.36 J-	0.36 J-	0.23 J	0.36 J	0.56 J	0.27 J-	0.32 J-		
Silver	1.43	0.175	mg/kg	0.23		0.15	0.15	0.094 J	0.22	0.21	0.13	0.14		
Sodium	2300	498.5	mg/kg	410 J		480 J	490 J	390 J	410 J	630 J	400 J	430 J		
Thallium	0.81	0.124	mg/kg	0.095 J		0.12 J	0.12 J	0.1 J	0.13 J	0.15 J	0.11 J	0.12 J		
Vanadium	117.2	85.19	mg/kg	65 J		80 J	82 J	62 J	82 J	100 J	71 J	77 J		
Zinc	410	83.94	mg/kg	60 J		87 J	80 J	66 J	96 J	100 J	70 J	83 J		
Mercury	2.28	0.258	mg/kg	0.16		0.21 J-	0.22 J-	0.18 J-	0.29 J-	0.34 J-	0.23 J-	0.25 J-		

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

		Location ID	DUT F3	DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT F5	DUT G1
Depth (Feet)		10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	
Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	
Chemical	CC	UCL95	Units							
Aluminum	77000*	23722	mg/kg	27000	20000	18000	23000	14000 J	17000 J	19000 J
Antimony	25	0.349	mg/kg	0.33 J	0.22 J	0.22 J	0.26 J	0.42 UJ	0.43 UJ	0.46 UJ
Arsenic	11.1	10.46	mg/kg	13 J	7 J	6.8 J	8.3 J	4.1 J	5.3 J	6 J
Barium	314.4	180	mg/kg	190	190	170	170	130 J	150 J	140 J
Beryllium	0.71	0.478	mg/kg	0.54	0.35	0.34	0.45	0.23 J	0.3 J	0.35 J
Cadmium	4.2	0.558	mg/kg	0.7 J	0.3 J	0.39 J	0.43 J	0.16 J	0.25 J	0.39 J
Chromium	120000	81.36	mg/kg	87 J	67 J	66 J	79 J	50 J	64 J	70 J
Cobalt	76.39	18.04	mg/kg	19	17	16	16	14	15	16
Copper	270	62.49	mg/kg	72 J	37 J	38 J	51 J	19 J	31 J	42 J
Iron	93000	32250	mg/kg	37000	28000	27000	31000	20000 J	25000 J	26000 J
Lead	155	15.17	mg/kg	16	9.4	9.7	11	4.7	7.1	9.1
Manganese	2433	579.5	mg/kg	610	410	450	430	290 J	390 J	440 J
Molybdenum	2.68	0.64	mg/kg	0.73	0.39	0.39	0.54	0.21 J	0.3 J	0.37 J
Nickel	112	86.56	mg/kg	93 J	78 J	76 J	83 J	68 J	74 J	79 J
Selenium	1.95	0.396	mg/kg	0.53 J-	0.24 J-	0.26 J-	0.35 J-	0.1 J-	0.16 J-	0.24 J-
Silver	1.43	0.175	mg/kg	0.2	0.099 J	0.1 J	0.12	0.04 J	0.077 J	0.11 J
Sodium	2300	498.5	mg/kg	600 J	390 J	370 J	490 J	350	380	440
Thallium	0.81	0.124	mg/kg	0.14 J	0.1 J	0.096 J	0.11 J	0.067 J	0.086 J	0.097 J
Vanadium	117.2	85.19	mg/kg	97 J	66 J	65 J	82 J	47 J	61 J	68 J
Zinc	410	83.94	mg/kg	98 J	65 J	72 J	74 J	45 J-	61 J-	69 J-
Mercury	2.28	0.258	mg/kg	0.28 J-	0.14 J-	0.15 J-	0.22 J-	0.078 J-	0.14 J-	0.18 J-
										0.16 J-

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID			DUT G1	DUT G1	DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3						
				Depth (Feet)	5-10		10-15		0-5		5-10		10-15		0-5		5-10		10-15	
					Date	7/23/2019	7/23/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019		
Aluminum	77000*	23722	mg/kg	32000 J	29000 J	19000	20000	36000	18000	29000	30000									
Antimony	25	0.349	mg/kg	0.35 J	0.31 J	0.41 UJ	0.42 UJ	0.44 J	0.41 UJ	0.45 J	0.3 J									
Arsenic	11.1	10.46	mg/kg	13 J	12 J	7.1 J	6.3 J	19 J	5.3 J	17 J	11 J									
Barium	314.4	180	mg/kg	210 J	190 J	190 J	150 J	230 J	140 J	220 J	210 J									
Beryllium	0.71	0.478	mg/kg	0.64 J	0.57 J	0.33	0.32	0.72	0.31	0.63	0.53									
Cadmium	4.2	0.558	mg/kg	0.88 J	0.81 J	0.31 J	0.31 J	1.4 J	0.32 J	1.3 J	0.71 J									
Chromium	120000	81.36	mg/kg	110 J	91 J	65 J	67 J	110 J	65 J	99 J	97 J									
Cobalt	76.39	18.04	mg/kg	22	22	15	15	32	15	22	21									
Copper	270	62.49	mg/kg	92 J	80 J	35 J	37 J	110 J	33 J	100 J	77 J									
Iron	93000	32250	mg/kg	37000 J	36000 J	26000	29000	47000	26000	40000	38000									
Lead	155	15.17	mg/kg	19	17	9	8.6	24	8.7	26	18									
Manganese	2433	579.5	mg/kg	760 J	820 J	410	440	1200	430	800	660									
Molybdenum	2.68	0.64	mg/kg	0.93 J	0.79 J	0.38	0.36	1.2	0.31	0.92	0.63									
Nickel	112	86.56	mg/kg	110 J	100 J	74 J	76 J	120 J	75 J	99 J	100 J									
Selenium	1.95	0.396	mg/kg	0.54 J-	0.47 J-	0.2 J	0.21 J	0.76 J	0.19 J	0.58 J	0.41 J									
Silver	1.43	0.175	mg/kg	0.2 J	0.2 J	0.11	0.098 J	0.3	0.11	0.28	0.21									
Sodium	2300	498.5	mg/kg	490	570	420 J	400 J	780 J	330 J	460 J	580 J									
Thallium	0.81	0.124	mg/kg	0.17 J	0.15 J	0.099 J	0.095 J	0.19 J	0.092 J	0.16 J	0.15 J									
Vanadium	117.2	85.19	mg/kg	120 J	100 J	65 J	63 J	140 J	65 J	120 J	100 J									
Zinc	410	83.94	mg/kg	110 J-	96 J-	65 J	66 J	130 J	65 J	120 J	100 J									
Mercury	2.28	0.258	mg/kg	0.31 J-	0.3 J-	0.18	0.15	0.45	0.11	0.59	0.42									

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT G4	DUT G4	DUT G4	DUT G5	DUT G5	DUT G5	DUT H1	DUT H1		
Chemical	CC	UCL95	Units	Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10
				Date	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
Aluminum	77000*	23722	mg/kg	22000	35000	35000	11000	21000	33000	32000	32000	32000
Antimony	25	0.349	mg/kg	0.57 UJ	0.41 J	0.42 J	0.4 UJ	0.45 UJ	0.37 J	0.35 J	0.37 J	0.37 J
Arsenic	11.1	10.46	mg/kg	6.5 J	16 J	16 J	3.7 J	7.7 J	17 J	14 J	17 J	17 J
Barium	314.4	180	mg/kg	150 J	220 J	200 J	110 J	170 J	200 J	210 J	200 J	200 J
Beryllium	0.71	0.478	mg/kg	0.37	0.75	0.74	0.2	0.38	0.65	0.63	0.65	0.65
Cadmium	4.2	0.558	mg/kg	0.37 J	1.4 J	1.1 J	0.14 J	0.51 J	0.83 J	0.81 J	0.9 J	0.9 J
Chromium	120000	81.36	mg/kg	81 J	120 J	100 J	46 J	76 J	100 J	110 J	97 J	97 J
Cobalt	76.39	18.04	mg/kg	17	23	26	12	17	19	22	22	22
Copper	270	62.49	mg/kg	43 J	120 J	110 J	17 J	49 J	92 J	96 J	97 J	97 J
Iron	93000	32250	mg/kg	32000	42000	43000	17000	30000	42000	39000	40000	40000
Lead	155	15.17	mg/kg	11	24	22	6.9	12	19	20	20	20
Manganese	2433	579.5	mg/kg	480	860	950	250	570	670	680	880	880
Molybdenum	2.68	0.64	mg/kg	0.37 J	0.93	0.98	0.26 J	0.43	0.94	0.89	0.96	0.96
Nickel	112	86.56	mg/kg	88 J	120 J	110 J	54 J	84 J	99 J	110 J	99 J	99 J
Selenium	1.95	0.396	mg/kg	0.25 J	0.68 J	0.69 J	0.2 UJ	0.27 J	0.63 J	0.57 J	0.59 J	0.59 J
Silver	1.43	0.175	mg/kg	0.17	0.27	0.27	0.053 J	0.14	0.22	0.22	0.25	0.25
Sodium	2300	498.5	mg/kg	390 J	750 J	770 J	260 J	400 J	780 J	630 J	910 J	910 J
Thallium	0.81	0.124	mg/kg	0.11 J	0.19	0.18	0.06 J	0.12 J	0.17 J	0.17 J	0.17 J	0.17 J
Vanadium	117.2	85.19	mg/kg	79 J	140 J	130 J	41 J	75 J	120 J	130 J	110 J	110 J
Zinc	410	83.94	mg/kg	77 J	130 J	120 J	39 J	82 J	100 J	110 J	110 J	110 J
Mercury	2.28	0.258	mg/kg	0.16	0.58	0.42	0.12	0.39	0.36	0.42	0.33	0.33

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT H1	DUT H2	DUT H2	DUT H2	DUT H3	DUT H3	DUT H4
Chemical	CC	UCL95	Units						
Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	
Date	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	
Aluminum	77000*	23722	mg/kg	32000	19000	39000	34000	29000	33000
Antimony	25	0.349	mg/kg	0.33 J	0.43 UJ	0.45 J	0.41 J	0.34 J	0.43 J
Arsenic	11.1	10.46	mg/kg	12 J	6.4 J	13 J	16 J	12 J	13 J
Barium	314.4	180	mg/kg	200 J	180 J	270 J	200 J	220	200
Beryllium	0.71	0.478	mg/kg	0.65	0.3	0.73	0.69	0.55	0.62
Cadmium	4.2	0.558	mg/kg	0.49 J	0.27 J	1.1 J	1.1 J	0.52 J	0.76 J
Chromium	120000	81.36	mg/kg	100 J	70 J	120 J	110 J	82	100
Cobalt	76.39	18.04	mg/kg	19	16	23	25	17	20
Copper	270	62.49	mg/kg	81 J	37 J	110 J	110 J	62 J	83 J
Iron	93000	32250	mg/kg	42000	26000	45000	42000	36000	40000
Lead	155	15.17	mg/kg	16	8.2	23	21	18 J	18
Manganese	2433	579.5	mg/kg	490	400	800	1200	550	740
Molybdenum	2.68	0.64	mg/kg	0.88	0.35	1	1.1	0.68 J	0.83 J
Nickel	112	86.56	mg/kg	100 J	76 J	130 J	120 J	87	99
Selenium	1.95	0.396	mg/kg	0.62 J	0.19 J	0.68 J	0.67 J	0.43 J-	0.53 J-
Silver	1.43	0.175	mg/kg	0.16	0.1 J	0.29	0.27	0.23	0.21
Sodium	2300	498.5	mg/kg	1100 J	440 J	630 J	950 J	570	640
Thallium	0.81	0.124	mg/kg	0.17 J	0.094 J	0.18 J	0.18 J	0.14 J	0.15 J
Vanadium	117.2	85.19	mg/kg	120 J	67 J	140 J	130 J	88	110
Zinc	410	83.94	mg/kg	92 J	60 J	110 J	110 J	81	95
Mercury	2.28	0.258	mg/kg	0.32	0.16	0.47	0.38	0.22	0.31
									0.36
									0.39

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT H4	DUT H4	DUT H5	DUT H5	DUT H5	DUT I1	DUT I1	DUT I1	
Chemical	CC	UCL95	Units	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Depth (Feet)	Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
Aluminum	77000*	23722	mg/kg	20000	22000	17000	20000	38000	22000	39000	32000
Antimony	25	0.349	mg/kg	0.43 UJ	0.23 J	0.42 UJ	0.44 UJ	0.43 J	0.41 UJ	0.49 J	0.39 J
Arsenic	11.1	10.46	mg/kg	6.9 J	8.5 J	5 J	6.3 J	16 J	7.2 J	17 J	14 J
Barium	314.4	180	mg/kg	170	170	140	150	200	210	210	200
Beryllium	0.71	0.478	mg/kg	0.36	0.4	0.29	0.36	0.71	0.35	0.79	0.6
Cadmium	4.2	0.558	mg/kg	0.39 J	0.49 J	0.2 J	0.34 J	1 J	0.31 J	0.97 J	0.78 J
Chromium	120000	81.36	mg/kg	66	73	62	68	110	72	110	96
Cobalt	76.39	18.04	mg/kg	16	17	14	15	25	16	23	24
Copper	270	62.49	mg/kg	37 J	48 J	26 J	37 J	100 J	41 J	110 J	87 J
Iron	93000	32250	mg/kg	30000	32000	25000	29000	45000	30000	47000	41000
Lead	155	15.17	mg/kg	10	11	6.4	9.3	22	9.8	25	19
Manganese	2433	579.5	mg/kg	470	500	380	450	1100	460	760	660
Molybdenum	2.68	0.64	mg/kg	0.37 J	0.51 J	0.32 J	0.43 J	1 J	0.39 J	1.1 J	0.85 J
Nickel	112	86.56	mg/kg	75	79	71	80	110	82	110	100
Selenium	1.95	0.396	mg/kg	0.23 J-	0.27 J-	0.16 J-	0.23 J-	0.62 J-	0.23 J-	0.74 J-	0.55 J-
Silver	1.43	0.175	mg/kg	0.23	0.12	0.067 J	0.12	0.25	0.13	0.3	0.21
Sodium	2300	498.5	mg/kg	330	430	310	320	800	460	720	710
Thallium	0.81	0.124	mg/kg	0.1 J	0.13 J	0.087 J	0.1 J	0.18 J	0.1 J	0.19	0.16 J
Vanadium	117.2	85.19	mg/kg	63	74	59	70	120	70	140	120
Zinc	410	83.94	mg/kg	73	78	54	64	110	65	110	100
Mercury	2.28	0.258	mg/kg	0.19	0.26	0.1	0.15	0.46	0.19	0.47	0.3

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3	DUT I4	DUT I4
Chemical	CC	UCL95	Units	0-5	5-10	10-15	0-5	5-10	10-15	0-5
	Depth (Feet)	Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	5-10
Aluminum	77000*	23722	mg/kg	20000	35000	36000	29000	36000	36000	21000
Antimony	25	0.349	mg/kg	0.43 UJ	0.45 J	0.44 J	0.37 J	0.4 J	0.44 J	0.31 J
Arsenic	11.1	10.46	mg/kg	6.7 J	15 J	17 J	11 J	15 J	18 J	8.5
Barium	314.4	180	mg/kg	190	200	220	200	200	200	150
Beryllium	0.71	0.478	mg/kg	0.35	0.68	0.73	0.57	0.72	0.74	0.43
Cadmium	4.2	0.558	mg/kg	0.36 J	1.4 J	0.99 J	0.71 J	0.94 J	0.87 J	0.78
Chromium	120000	81.36	mg/kg	72	99	110	89	100	100	73
Cobalt	76.39	18.04	mg/kg	16	22	27	20	27	22	16
Copper	270	62.49	mg/kg	38 J	100 J	100 J	77 J	98 J	100 J	63
Iron	93000	32250	mg/kg	29000	42000	45000	37000	44000	43000	29000
Lead	155	15.17	mg/kg	9.5	26	21	20	20	22	16
Manganese	2433	579.5	mg/kg	470	790	830	680	930	680	330
Molybdenum	2.68	0.64	mg/kg	0.41 J	0.99 J	1.1 J	0.66 J	0.96 J	1 J	0.52
Nickel	112	86.56	mg/kg	81	100	110	92	110	100	71
Selenium	1.95	0.396	mg/kg	0.22 J-	0.57 J-	0.7 J-	0.48 J-	0.63 J-	0.68 J-	0.33
Silver	1.43	0.175	mg/kg	0.12	0.27	0.27	0.27	0.25	0.25	0.15
Sodium	2300	498.5	mg/kg	390	520	740	430	690	740	390
Thallium	0.81	0.124	mg/kg	0.1 J	0.17	0.18 J	0.15 J	0.17 J	0.18	0.14 J
Vanadium	117.2	85.19	mg/kg	70	110	130	96	120	130	80
Zinc	410	83.94	mg/kg	68	130	110	97	110	110	87
Mercury	2.28	0.258	mg/kg	0.16	0.35	0.39	0.42	0.45	0.53	0.33

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

		Location ID	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1	DUT J2	
Depth (Feet)		10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5		
Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	
Chemical	CC	UCL95	Units								
Aluminum	77000*	23722	mg/kg	33000	21000	26000	21000	25000	30000	28000	19000
Antimony	25	0.349	mg/kg	0.42 J	0.22 J	0.32 J	0.26 J	0.26 J	0.39 J	0.35 J	0.22 J
Arsenic	11.1	10.46	mg/kg	15	8	13	9.8	9.5	14	17	7.1
Barium	314.4	180	mg/kg	200	210	170	150	210	180	180	180
Beryllium	0.71	0.478	mg/kg	0.67	0.37	0.57	0.43	0.47	0.72	0.68	0.36
Cadmium	4.2	0.558	mg/kg	0.83	0.35	0.83	0.49	0.43	0.74	0.83	0.3
Chromium	120000	81.36	mg/kg	95	69	84	71	77	95	91	64
Cobalt	76.39	18.04	mg/kg	19	16	20	16	17	22	18	15
Copper	270	62.49	mg/kg	91	41	77	51	55	77	89	37
Iron	93000	32250	mg/kg	41000	29000	35000	28000	33000	37000	37000	25000
Lead	155	15.17	mg/kg	21	11	17	11	14	19	20	10
Manganese	2433	579.5	mg/kg	630	450	730	420	540	690	540	390
Molybdenum	2.68	0.64	mg/kg	0.89	0.44	0.75	0.59	0.53	0.9	0.67	0.37
Nickel	112	86.56	mg/kg	97	81	91	73	86	92	94	72
Selenium	1.95	0.396	mg/kg	0.64	0.29	0.58	0.34	0.37	0.65	0.62	0.24 J
Silver	1.43	0.175	mg/kg	0.23	0.12	0.21	0.12	0.18	0.2	0.23	0.11
Sodium	2300	498.5	mg/kg	600	470	500	520	530	520	660	440
Thallium	0.81	0.124	mg/kg	0.17	0.11 J	0.14 J	0.12 J	0.12 J	0.15 J	0.17 J	0.098 J
Vanadium	117.2	85.19	mg/kg	110	68	97	80	80	110	100	64
Zinc	410	83.94	mg/kg	110	70	100	80	79	93	120	65
Mercury	2.28	0.258	mg/kg	0.4	0.2	0.39	0.27	0.29	0.49	0.4	0.21

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4		
Chemical	CC	UCL95	Units	Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
				Date	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019
Aluminum	77000*	23722	mg/kg	20000	30000	19000	20000	30000	21000	27000	18000	
Antimony	25	0.349	mg/kg	0.43 U	0.4 J	0.4 UJ	0.45 UJ	0.35 J	0.23 J	0.27 J	0.44 UJ	
Arsenic	11.1	10.46	mg/kg	7	14	5.5 J	7.5 J	18 J	8.6 J	12 J	6.9 J	
Barium	314.4	180	mg/kg	160	190	140	170	200	160	170	130	
Beryllium	0.71	0.478	mg/kg	0.4	0.72	0.34	0.37	0.6	0.43	0.56	0.33	
Cadmium	4.2	0.558	mg/kg	0.48	0.97	0.33 J	0.39 J	1 J	0.65 J	0.61 J	0.32 J	
Chromium	120000	81.36	mg/kg	68	97	63 J	71 J	96 J	69 J	81 J	57 J	
Cobalt	76.39	18.04	mg/kg	16	23	15	16	24	18	16	15	
Copper	270	62.49	mg/kg	43	90	33 J	41 J	95 J	51	66	32	
Iron	93000	32250	mg/kg	27000	38000	28000	29000	39000	30000 J	35000 J	24000 J	
Lead	155	15.17	mg/kg	10	18	9	11	21	13	15	7	
Manganese	2433	579.5	mg/kg	540	1100	460	440	840	580	450	330	
Molybdenum	2.68	0.64	mg/kg	0.47	1	0.35	0.48	0.97	0.52 J	0.73 J	0.38 J	
Nickel	112	86.56	mg/kg	83	100	77	81	100	81 J	82 J	63 J	
Selenium	1.95	0.396	mg/kg	0.28 J	0.68	0.21 J	0.27 J	0.54 J	0.3 J-	0.45 J-	0.16 J-	
Silver	1.43	0.175	mg/kg	0.13	0.22	0.12	0.13	0.24	0.17 J	0.16 J	0.066 J	
Sodium	2300	498.5	mg/kg	420	690	330 J	360 J	680 J	320 J	520 J	520 J	
Thallium	0.81	0.124	mg/kg	0.1 J	0.16 J	0.099 J	0.11 J	0.19	0.11 J	0.14 J	0.1 J	
Vanadium	117.2	85.19	mg/kg	72	120	65	72	120	72	93	60	
Zinc	410	83.94	mg/kg	72	130	65 J-	74 J-	120 J-	87 J	88 J	69 J	
Mercury	2.28	0.258	mg/kg	0.2	0.44	0.15	0.18	0.42	0.24	0.26	0.16	

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2	DUT K2
				Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5
					Date	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019
Aluminum	77000*	23722	mg/kg	25000	27000	24000	20000	33000	30000	20000	20000	31000		
Antimony	25	0.349	mg/kg	0.24 J	0.33 J	0.27 J	0.43 UJ	0.3 J	0.33 J	0.42 UJ	0.41 J			
Arsenic	11.1	10.46	mg/kg	9.9 J	17 J	9.6 J	6.3 J	15 J	14 J	7.4 J	15			
Barium	314.4	180	mg/kg	200	190	150	170	200	200	200	200	210		
Beryllium	0.71	0.478	mg/kg	0.47	0.54	0.49	0.35	0.68	0.64	0.34	0.69			
Cadmium	4.2	0.558	mg/kg	0.46 J	0.75 J	0.59 J	0.42 J	0.78 J	0.77 J	0.32 J	0.74			
Chromium	120000	81.36	mg/kg	80 J	78 J	76 J	68 J	97 J	89 J	67 J	98			
Cobalt	76.39	18.04	mg/kg	17	19	18	15	21	20	16	21			
Copper	270	62.49	mg/kg	57	73	59	40	86	79	38	85			
Iron	93000	32250	mg/kg	34000 J	36000 J	30000 J	29000 J	40000 J	38000 J	28000 J	39000			
Lead	155	15.17	mg/kg	15	17	13	11	21	20	10	20			
Manganese	2433	579.5	mg/kg	540	590	540	510	730	730	450	660			
Molybdenum	2.68	0.64	mg/kg	0.61 J	0.78 J	0.65 J	0.38 J	1 J	0.95 J	0.43 J	0.92			
Nickel	112	86.56	mg/kg	86 J	82 J	78 J	78 J	96 J	90 J	79 J	95			
Selenium	1.95	0.396	mg/kg	0.36 J-	0.49 J-	0.35 J-	0.23 J-	0.59 J-	0.53 J-	0.2 J-	0.56			
Silver	1.43	0.175	mg/kg	0.19 J	0.18 J	0.15 J	0.16 J	0.21 J	0.22 J	0.11 J	0.21			
Sodium	2300	498.5	mg/kg	570 J	570 J	560 J	300 J	530 J	540 J	350 J	610			
Thallium	0.81	0.124	mg/kg	0.12 J	0.15 J	0.13 J	0.1 J	0.17 J	0.17	0.11 J	0.17 J			
Vanadium	117.2	85.19	mg/kg	85	99	83	65	110	100	66	110			
Zinc	410	83.94	mg/kg	82 J	100 J	88 J	72 J	100 J	100 J	70 J	110			
Mercury	2.28	0.258	mg/kg	0.22	0.36	0.3	0.17	0.34	0.43	0.17	0.39			

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT K2	DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5	
	Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5		
Chemical	CC	UCL95	Units								
Aluminum	77000*	23722	mg/kg	27000	16000	26000	21000	17000	19000	28000	15000
Antimony	25	0.349	mg/kg	0.3 J	0.42 UJ	0.29 J	0.23 J	0.42 UJ	0.54 U	0.39 J	0.43 UJ
Arsenic	11.1	10.46	mg/kg	14 J	4.7 J	13 J	8.7 J	7.1 J	6.8	12	5 J
Barium	314.4	180	mg/kg	170	130	180	190	190	170	190	140 J
Beryllium	0.71	0.478	mg/kg	0.53	0.27	0.52	0.38	0.31	0.38	0.57	0.27
Cadmium	4.2	0.558	mg/kg	0.71 J	0.24 J	0.69 J	0.47 J	0.32 J	0.37	0.68	0.21 J
Chromium	120000	81.36	mg/kg	81 J	57 J	79 J	69 J	59 J	67	86	60
Cobalt	76.39	18.04	mg/kg	19	13	20	16	15	15	20	13
Copper	270	62.49	mg/kg	73	25	71	48	35	36	75	24
Iron	93000	32250	mg/kg	36000 J	25000 J	34000 J	28000 J	24000 J	28000	35000	23000
Lead	155	15.17	mg/kg	16	7	17	13	9.3	8.3	15	6.4
Manganese	2433	579.5	mg/kg	650	340	630	450	410	420	630	340
Molybdenum	2.68	0.64	mg/kg	0.8 J	0.32 J	0.79 J	0.54 J	0.4 J	0.45	0.88	0.28 J
Nickel	112	86.56	mg/kg	85 J	65 J	82 J	76 J	69 J	78	90	67
Selenium	1.95	0.396	mg/kg	0.45 J-	0.12 J-	0.43 J-	0.27 J-	0.19 J-	0.23 J	0.52	0.17 J
Silver	1.43	0.175	mg/kg	0.17 J	0.088 J	0.18 J	0.13 J	0.1 J	0.091 J	0.18	0.078 J
Sodium	2300	498.5	mg/kg	540 J	250 J	510 J	340 J	290 J	400	740	310 J
Thallium	0.81	0.124	mg/kg	0.15 J	0.08 J	0.14 J	0.11 J	0.093 J	0.096 J	0.15 J	0.078 J
Vanadium	117.2	85.19	mg/kg	93	57	91	69	59	68	99	58 J
Zinc	410	83.94	mg/kg	97 J	55 J	93 J	77 J	63 J	65	100	52
Mercury	2.28	0.258	mg/kg	0.44	0.11	0.38	0.27	0.16	0.24	0.32	0.11 J

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	UCL95	Units	Location ID		DUT K5	DUT K5	DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2
				Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
					Date	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	
Aluminum	77000*	23722	mg/kg	28000	23000	20000	27000	27000	22000	28000	23000		
Antimony	25	0.349	mg/kg	0.4 J	0.31 J	0.44 UJ	0.45 J	0.33 J	0.3 J	0.34 J	0.26 J		
Arsenic	11.1	10.46	mg/kg	14	9.9	6.6 J	12	12 J	10 J	13 J	9.6 J		
Barium	314.4	180	mg/kg	190	160	160 J	170	180 J	220 J	200 J	160 J		
Beryllium	0.71	0.478	mg/kg	0.6	0.5	0.39	0.52	0.54	0.47	0.64	0.47		
Cadmium	4.2	0.558	mg/kg	0.85	0.57	0.45 J	0.72	0.67 J	0.45 J	0.76 J	0.54 J		
Chromium	120000	81.36	mg/kg	85	74	69	85	81	74	92	71		
Cobalt	76.39	18.04	mg/kg	21	17	15	19	20	17	19	18		
Copper	270	62.49	mg/kg	77	57	42	75	66	54	77	54		
Iron	93000	32250	mg/kg	36000	30000	30000	34000	37000	31000	37000	30000		
Lead	155	15.17	mg/kg	17	12	11	17	13	14	18	11		
Manganese	2433	579.5	mg/kg	730	490	480	650	700	540	630	520		
Molybdenum	2.68	0.64	mg/kg	0.81	0.61	0.38	0.85	0.72	0.56	0.76	0.59		
Nickel	112	86.56	mg/kg	88	75	80	89	85	81	93	75		
Selenium	1.95	0.396	mg/kg	0.52	0.36	0.28 J	0.46	0.46 J	0.37 J	0.55 J	0.38 J		
Silver	1.43	0.175	mg/kg	0.2	0.13	0.19 J	0.19	0.14 J	0.17 J	0.19 J	0.13 J		
Sodium	2300	498.5	mg/kg	600	610	280 J	520	700 J	490 J	560 J	510 J		
Thallium	0.81	0.124	mg/kg	0.15 J	0.13 J	0.1 J	0.13 J	0.15 J	0.12 J	0.16 J	0.13 J		
Vanadium	117.2	85.19	mg/kg	98	82	71 J	97	97 J	80 J	110 J	81 J		
Zinc	410	83.94	mg/kg	100	88	76	89	100	81	98	83		
Mercury	2.28	0.258	mg/kg	0.7 J	0.35 J	0.17 J	0.3 J	0.38 J	0.3 J	0.39 J	0.34 J		

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID			DUT L3	DUT L3	DUT L3	DUT L4	DUT L4	DUT L4	DUT L5	DUT L5	
	Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10		
Chemical	CC	UCL95	Units	Date	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/31/2019	7/31/2019	
Aluminum	77000*	23722	mg/kg	29000	30000	25000	17000	16000	22000	27000	22000
Antimony	25	0.349	mg/kg	0.41 J	0.33 J	0.32 J	0.43 UJ	0.42 UJ	0.3 J	0.31 J	0.24 J
Arsenic	11.1	10.46	mg/kg	12	15 J	13 J	6.3 J	6.1 J	9.4 J	13 J	8.4 J
Barium	314.4	180	mg/kg	200	210 J	180 J	170 J	110 J	160 J	210 J	180 J
Beryllium	0.71	0.478	mg/kg	0.56	0.63	0.54	0.32	0.29	0.45	0.61	0.45
Cadmium	4.2	0.558	mg/kg	0.67	0.8 J	0.67 J	0.44 J	0.23 J	0.41 J	0.97 J	0.48 J
Chromium	120000	81.36	mg/kg	92	91	75	62	53	73	92	76
Cobalt	76.39	18.04	mg/kg	19	19	16	15	13	14	20	17
Copper	270	62.49	mg/kg	72	84	66	32	28	50	78	50
Iron	93000	32250	mg/kg	37000	40000	34000	26000	23000	30000	38000	31000
Lead	155	15.17	mg/kg	17	18	14	7.6	6.3	10	17	14
Manganese	2433	579.5	mg/kg	600	660	540	420	330	390	720	530
Molybdenum	2.68	0.64	mg/kg	0.84	0.81	0.71	0.45	0.32	0.57	0.78	0.54
Nickel	112	86.56	mg/kg	100	90	77	73	56	72	95	84
Selenium	1.95	0.396	mg/kg	0.48	0.63 J	0.45 J	0.22 J	0.18 J	0.36 J	0.51 J	0.34 J
Silver	1.43	0.175	mg/kg	0.17	0.21 J	0.17 J	0.078 J	0.064 J	0.12 J	0.18 J	0.18 J
Sodium	2300	498.5	mg/kg	550	670 J	530 J	310 J	430 J	690 J	520 J	360 J
Thallium	0.81	0.124	mg/kg	0.13 J	0.16 J	0.13 J	0.091 J	0.08 J	0.11 J	0.15 J	0.12 J
Vanadium	117.2	85.19	mg/kg	100	110 J	87 J	62 J	56 J	80 J	100 J	77 J
Zinc	410	83.94	mg/kg	93	110	92	63	61	80	100	82
Mercury	2.28	0.258	mg/kg	0.31 J	0.41 J	0.34 J	0.15 J	0.13 J	0.28 J	0.35 J-	0.21 J-

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 1
DUTRA METALS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

		Location ID	DUT L5
		Depth (Feet)	10-15
		Date	7/31/2019
Chemical	CC	UCL95	Units
Aluminum	77000*	23722	mg/kg
Antimony	25	0.349	mg/kg
Arsenic	11.1	10.46	mg/kg
Barium	314.4	180	mg/kg
Beryllium	0.71	0.478	mg/kg
Cadmium	4.2	0.558	mg/kg
Chromium	120000	81.36	mg/kg
Cobalt	76.39	18.04	mg/kg
Copper	270	62.49	mg/kg
Iron	93000	32250	mg/kg
Lead	155	15.17	mg/kg
Manganese	2433	579.5	mg/kg
Molybdenum	2.68	0.64	mg/kg
Nickel	112	86.56	mg/kg
Selenium	1.95	0.396	mg/kg
Silver	1.43	0.175	mg/kg
Sodium	2300	498.5	mg/kg
Thallium	0.81	0.124	mg/kg
Vanadium	117.2	85.19	mg/kg
Zinc	410	83.94	mg/kg
Mercury	2.28	0.258	mg/kg

CC - Comparison Criterion - HPNS Parcel E RD, Aug 2014

* - EPA Residential RSL

Green - Result exceeds the CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

J-: Low matrix spike recovery

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3	DUT A3
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.4 U	1.3 U
1,1,1-Trichloroethane	87000000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,1,2-Trichloroethane	11000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
1,1-Dichloroethane	33000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
1,1-Dichloroethene	2400000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
1,2,3-Trichlorobenzene	490000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,2,3-Trichloropropane	50	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,2,4-Trichlorobenzene	220000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,2,4-Trimethylbenzene	620000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,2-Dibromo-3-chloropropane	54	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,2-Dibromoethane	340	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
1,2-Dichlorobenzene	19000000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,2-Dichloroethane	4300	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U
1,2-Dichloropropane	9400	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U
1,3,5-Trimethylbenzene	780000	ug/kg	1.2 U	1.3 U	1.7 UJ	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.4 U	1.3 U
1,3-Dichloropropane	16000000	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
1,4-Dichlorobenzene	24000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
2-Butanone	280000000	ug/kg	6.1 U	6.5 U	8.6 U	5.9 U	7.3 UJ	6.4 UJ	6.7 U	7.1 U	7.1 U	6.3 U
2-chlorotoluene	16000000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
2-Hexanone	2100000	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
4-Chlorotoluene	16000000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
4-methyl-2-pentanone	53000000	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
Acetone	610000000	ug/kg	6.1 U	6.5 U	8.6 U	37	61 J	35 J	38 J	28 J	28 J	24 J
Benzene	11000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
Bromobenzene	3000000	ug/kg	2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.8 U	2.5 U
Bromochloromethane	1600000	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U
Bromodichloromethane	2700	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U
Bromoform	620000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.4 U	1.3 U
Bromomethane	73000	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U
Carbon Disulfide	8200000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
Carbon Tetrachloride	6100	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U
Chlorobenzene	2900000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.4 U	1.3 U
Chloroform	2900	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
Chloromethane	1200000	ug/kg	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U
Cis-1,2-Dichloroethene	1600000	ug/kg	2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.8 U	2.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3	DUT A3
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/17/2019	1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.3 U
Dibromomethane	250000	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.5 U
Dichlorodifluoromethane	940000	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.5 U
Ethylbenzene	54000	ug/kg			1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.3 U
Hexachlorobutadiene	62000	ug/kg			1.2 U	1.3 U	1.7 UJ	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.3 U
m,p-Xylene		ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.5 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.5 U
Methylene chloride	560000	ug/kg			16	18	22	13	23 J	20 J	15	14	14
n-Butylbenzene	39000000	ug/kg			2.5 U	2.6 U	3.4 UJ	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.5 U
n-Propylbenzene	34000000	ug/kg			1.2 U	1.3 U	1.7 UJ	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.3 U
o-Xylene	6900000	ug/kg			1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.3 U
Styrene	63000000	ug/kg			1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 UJ	1.3 U	1.4 U	1.3 U
Tetrachloroethene	220000	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 UJ	2.7 U	2.8 U	2.5 U
Toluene	50000000	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.5 U
Trans-1,2-Dichloroethene	1500000	ug/kg			1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.3 U
Trans-1,3-Dichloropropene	17000	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.5 U
Trichloroethene	9100	ug/kg			2.5 U	2.6 U	3.4 U	2.4 U	2.9 UJ	2.6 U	2.7 U	2.8 U	2.5 U
Trichlorofluoromethane	7900000	ug/kg			1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.3 U
Vinyl chloride	600	ug/kg			1.2 U	1.3 U	1.7 U	1.2 U	1.5 UJ	1.3 U	1.3 U	1.4 U	1.3 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2	DUT B2	DUT B2
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,1,1-Trichloroethane	87000000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,1,2,2-Tetrachloroethane	5600	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,1,2-Trichloroethane	11000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,1-Dichloroethane	33000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,1-Dichloroethene	2400000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,2,3-Trichlorobenzene	490000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2,3-Trichloropropane	50	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2,4-Trichlorobenzene	220000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2,4-Trimethylbenzene	620000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2-Dibromo-3-chloropropane	54	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2-Dibromoethane	340	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,2-Dichlorobenzene	19000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2-Dichloroethane	4300	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,2-Dichloropropane	9400	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,3,5-Trimethylbenzene	7800000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
1,3-Dichloropropane	16000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
1,4-Dichlorobenzene	24000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
2-Butanone	280000000	ug/kg		5.8 U	6.6 U	7.2 U	4.8 J	6.3 U	6.7 U	6.8 U	6.9 U	6.2 U
2-chlorotoluene	16000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
2-Hexanone	2100000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
4-Chlorotoluene	16000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
4-methyl-2-pentanone	53000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Acetone	610000000	ug/kg		5.8 U	27 J	35 J	37 J	32 J	44 J	30 J	24 J	46 J
Benzene	11000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Bromobenzene	3000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Bromochloromethane	1600000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Bromodichloromethane	2700	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Bromoform	620000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Bromomethane	73000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Carbon Disulfide	8200000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Carbon Tetrachloride	6100	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Chlorobenzene	2900000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Chloroform	2900	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Chloromethane	1200000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Cis-1,2-Dichloroethene	1600000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2	DUT B2	DUT B2
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
Dibromochloromethane	6800	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Dibromomethane	250000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Dichlorodifluoromethane	940000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 U	2.8 U	2.5 U
Ethylbenzene	54000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Hexachlorobutadiene	62000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
m-,p-Xylene		ug/kg		2.3 UJ	2.7 U	2.9 UJ	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
Methylene chloride	560000	ug/kg		12	14	9.1	9.5	14 J	14	13 J	12 J	10 J
n-Butylbenzene	39000000	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
n-Propylbenzene	34000000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
o-Xylene	6900000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Styrene	63000000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Tetrachloroethene	220000	ug/kg		2.3 U	2.7 U	2.9 UJ	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
Toluene	50000000	ug/kg		2.3 U	2.7 U	2.9 UJ	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
Trans-1,2-Dichloroethene	1500000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.3 U	2.7 U	2.9 UJ	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
Trichloroethene	9100	ug/kg		2.3 U	2.7 U	2.9 U	2.6 U	2.5 U	2.7 U	2.7 UJ	2.8 U	2.5 UJ
Trichlorofluoromethane	7900000	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U
Vinyl chloride	600	ug/kg		1.2 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.2 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4	DUT B5	DUT B5	DUT B5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.3 U	X	1.3 U	1.2 UJ	1.2 U	1.3 U	X	1.3 U	1.3 U	1.3 U
1,1,1-Trichloroethane	87000000	ug/kg	1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U	1.3 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,1,2-Trichloroethane	11000	ug/kg	1.3 U	X	1.2 U	1.2 U	1.1 U	1.3 U	X	1.2 UJ	1.3 U	
1,1-Dichloroethane	33000	ug/kg	1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U	
1,1-Dichloroethene	2400000	ug/kg	1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U	
1,2,3-Trichlorobenzene	490000	ug/kg	2.6 UJ	4.1 J	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
1,2,3-Trichloropropane	50	ug/kg	2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,2,4-Trichlorobenzene	220000	ug/kg	2.6 UJ	5.7 J	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
1,2,4-Trimethylbenzene	620000	ug/kg	2.6 UJ	X	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
1,2-Dibromo-3-chloropropane	54	ug/kg	2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,2-Dibromoethane	340	ug/kg	1.3 UJ	X	1.3 U	1.2 U	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ	
1,2-Dichlorobenzene	19000000	ug/kg	2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,2-Dichloroethane	4300	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,2-Dichloropropane	9400	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,3,5-Trimethylbenzene	7800000	ug/kg	1.3 UJ	X	1.3 U	1.2 UJ	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ	
1,3-Dichloropropane	16000000	ug/kg	2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U	
1,4-Dichlorobenzene	24000	ug/kg	2.6 UJ	X	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 U	
2-Butanone	280000000	ug/kg	6.4 UJ	X	6.3 U	6.2 U	5.8 U	6.6 UJ	X	6.5 U	6.3 UJ	
2-chlorotoluene	16000000	ug/kg	2.6 UJ	X	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
2-Hexanone	2100000	ug/kg	2.6 UJ	X	1.4 J	2.5 U	1.4 J	2.6 UJ	X	2.6 U	2.5 UJ	
4-Chlorotoluene	16000000	ug/kg	2.6 UJ	X	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
4-methyl-2-pentanone	53000000	ug/kg	2.6 UJ	X	2.5 U	2.5 U	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
Acetone	610000000	ug/kg	21 J	X	6.1 UJ	6.2 UJ	5.8 UJ	22 J	X	7.9 J	6.3 UJ	
Benzene	11000	ug/kg	1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U	
Bromobenzene	3000000	ug/kg	2.6 UJ	X	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ	
Bromochloromethane	1600000	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	
Bromodichloromethane	2700	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	
Bromoform	620000	ug/kg	1.3 UJ	X	1.3 U	1.2 UJ	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ	
Bromomethane	73000	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	
Carbon Disulfide	8200000	ug/kg	1.3 UJ	X	1.3 U	1.2 U	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ	
Carbon Tetrachloride	6100	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	
Chlorobenzene	2900000	ug/kg	1.3 U	X	1.3 U	1.2 UJ	1.2 U	1.3 U	X	1.3 U	1.3 U	
Chloroform	2900	ug/kg	1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U	
Chloromethane	1200000	ug/kg	1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U	
Cis-1,2-Dichloroethene	1600000	ug/kg	2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4	DUT B5	DUT B5	DUT B5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Dibromochloromethane	6800	ug/kg		1.3 U	X	1.3 U	1.2 UJ	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ
Dibromomethane	250000	ug/kg		2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U
Dichlorodifluoromethane	940000	ug/kg		2.6 UJ	X	2.5 U	2.5 U	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ
Ethylbenzene	54000	ug/kg		1.3 U	X	1.3 U	1.2 UJ	1.2 U	1.3 U	X	1.3 U	1.3 U
Hexachlorobutadiene	62000	ug/kg		1.3 UJ	X	1.3 U	1.2 UJ	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ
m-,p-Xylene		ug/kg		2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U
Methylene chloride	560000	ug/kg		11	X	8	10	10	11 J	5.3 J	7.6	11
n-Butylbenzene	39000000	ug/kg		2.6 UJ	X	2.5 U	2.5 UJ	2.3 U	2.6 UJ	X	2.6 U	2.5 UJ
n-Propylbenzene	34000000	ug/kg		1.3 UJ	X	1.3 U	1.2 UJ	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ
o-Xylene	6900000	ug/kg		1.3 U	X	1.3 U	1.2 UJ	1.2 U	1.3 U	X	1.3 U	1.3 U
Styrene	63000000	ug/kg		1.3 U	X	1.3 U	1.2 UJ	1.2 U	1.3 U	X	1.3 U	1.3 U
Tetrachloroethene	220000	ug/kg		2.6 U	X	2.5 U	2.5 UJ	2.3 U	2.6 U	X	2.6 U	2.5 U
Toluene	50000000	ug/kg		2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U
Trichloroethene	9100	ug/kg		2.6 U	X	2.5 U	2.5 U	2.3 U	2.6 U	X	2.6 U	2.5 U
Trichlorofluoromethane	7900000	ug/kg		1.3 UJ	X	1.3 U	1.2 U	1.2 U	1.3 UJ	X	1.3 U	1.3 UJ
Vinyl chloride	600	ug/kg		1.3 U	X	1.3 U	1.2 U	1.2 U	1.3 U	X	1.3 U	1.3 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT C1	DUT C1	DUT C1	DUT C2	DUT C2	DUT C2	DUT C3	DUT C3	DUT C3
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 UJ	1.3 UJ	1.2 U	1.3 U	1.2 UJ	1.2 U	1.4 U
1,1,1-Trichloroethane	87000000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 UJ	1.2 U	1.4 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,1,2-Trichloroethane	11000	ug/kg	1.3 U	1.4 U	1.3 UJ	0.66 J	1.3 U	1.2 U	1.3 U	1.2 UJ	1.2 U	1.4 U
1,1-Dichloroethane	33000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 UJ	1.2 U	1.4 U
1,1-Dichloroethene	2400000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 UJ	1.2 U	1.4 U
1,2,3-Trichlorobenzene	490000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2,3-Trichloropropane	50	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2,4-Trichlorobenzene	220000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2,4-Trimethylbenzene	620000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2-Dibromo-3-chloropropane	54	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2-Dibromoethane	340	ug/kg	1.3 UJ	1.3 U	1.3 UJ	1.2 UJ	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.2 U	1.4 U
1,2-Dichlorobenzene	19000000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2-Dichloroethane	4300	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,2-Dichloropropane	9400	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,3,5-Trimethylbenzene	7800000	ug/kg	1.3 U	1.4 UJ	1.3 UJ	1.2 UJ	1.3 UJ	1.2 UJ	1.3 U	1.2 UJ	1.2 U	1.4 U
1,3-Dichloropropane	16000000	ug/kg	2.7 U	2.7 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
1,4-Dichlorobenzene	24000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
2-Butanone	280000000	ug/kg	6.4 U	6.7 U	6.7 UJ	5.9 U	46 J	6 UJ	6.7 U	6 UJ	6 UJ	6.8 U
2-chlorotoluene	16000000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
2-Hexanone	2100000	ug/kg	2.7 UJ	2.7 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
4-Chlorotoluene	16000000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
4-methyl-2-pentanone	53000000	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
Acetone	610000000	ug/kg	35 J	31 J	62 J	34 J	100 J	76 J	27 J	71 J	61	
Benzene	11000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 UJ	1.2 U	1.4 U
Bromobenzene	3000000	ug/kg	2.6 U	2.8 U	2.7 UJ	2.4 UJ	2.7 UJ	2.4 UJ	2.7 U	2.4 UJ	2.4 U	2.7 U
Bromochloromethane	1600000	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U
Bromodichloromethane	2700	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.7 U	2.4 UJ	2.7 U
Bromoform	620000	ug/kg	1.3 UJ	1.3 U	1.3 UJ	1.2 UJ	1.3 UJ	1.2 UJ	1.3 U	1.2 UJ	1.3 U	1.4 U
Bromomethane	73000	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.7 U	2.4 UJ	2.7 U
Carbon Disulfide	8200000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.3 U	1.4 U
Carbon Tetrachloride	6100	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.7 U	2.4 UJ	2.7 U
Chlorobenzene	2900000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 UJ	1.3 UJ	1.2 UJ	1.3 U	1.2 U	1.3 U	1.4 U
Chloroform	2900	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U	1.3 U	1.4 U
Chloromethane	1200000	ug/kg	1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U	1.3 U	1.4 U
Cis-1,2-Dichloroethene	1600000	ug/kg	2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.4 U	2.7 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT C1	DUT C1	DUT C1	DUT C2	DUT C2	DUT C2	DUT C3	DUT C3	DUT C3
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/18/2019	1.3 U	1.3 U	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.4 U
Dibromomethane	250000	ug/kg			2.6 U	2.7 U	2.7 U	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Dichlorodifluoromethane	940000	ug/kg			2.6 U	2.7 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U	2.4 UJ	2.7 U
Ethylbenzene	54000	ug/kg			1.3 U	1.3 U	1.3 UJ	1.2 UJ	1.3 U	1.2 U	1.3 U	1.2 UJ	1.4 U
Hexachlorobutadiene	62000	ug/kg			1.3 U	1.4 UJ	1.3 UJ	1.2 UJ	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.4 U
m-,p-Xylene		ug/kg			2.7 U	2.7 U	2.7 UJ	2.4 UJ	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg			2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Methylene chloride	560000	ug/kg			9.5	8.6	9.3 J	9	14 J	10	11 J	13 J	14
n-Butylbenzene	39000000	ug/kg			2.6 U	2.8 UJ	2.7 U	2.4 UJ	2.7 U	2.4 UJ	2.7 U	2.4 UJ	2.7 U
n-Propylbenzene	34000000	ug/kg			1.3 U	1.4 UJ	1.3 UJ	1.2 UJ	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.4 U
o-Xylene	6900000	ug/kg			1.3 U	1.3 U	1.3 UJ	1.2 UJ	1.3 U	1.2 U	1.3 U	1.2 UJ	1.4 U
Styrene	63000000	ug/kg			1.3 U	1.3 U	1.3 UJ	1.2 UJ	1.3 U	1.2 U	1.3 U	1.2 UJ	1.4 U
Tetrachloroethene	220000	ug/kg			2.7 U	2.7 U	2.7 UJ	2.4 UJ	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Toluene	50000000	ug/kg			2.7 U	2.7 U	2.7 UJ	2.4 UJ	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Trans-1,2-Dichloroethene	1500000	ug/kg			1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 UJ	1.4 U
Trans-1,3-Dichloropropene	17000	ug/kg			2.7 U	2.7 U	2.7 UJ	2.4 UJ	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Trichloroethene	9100	ug/kg			2.6 U	2.7 U	2.7 UJ	2.4 U	2.7 U	2.4 U	2.7 U	2.4 UJ	2.7 U
Trichlorofluoromethane	7900000	ug/kg			1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 UJ	1.3 U	1.2 UJ	1.4 U
Vinyl chloride	600	ug/kg			1.3 U	1.3 U	1.3 UJ	1.2 U	1.3 U	1.2 U	1.3 U	1.2 UJ	1.4 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT C4	DUT C4	DUT C4	DUT C5	DUT C5	DUT C5	DUT D1	DUT D1	DUT D1
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
1,1,1-Trichloroethane	87000000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
1,1,2,2-Tetrachloroethane	5600	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,1,2-Trichloroethane	11000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
1,1-Dichloroethane	33000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
1,1-Dichloroethene	2400000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
1,2,3-Trichlorobenzene	490000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,2,3-Trichloropropane	50	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,2,4-Trichlorobenzene	220000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,2,4-Trimethylbenzene	620000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,2-Dibromo-3-chloropropane	54	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,2-Dibromoethane	340	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
1,2-Dichlorobenzene	19000000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
1,2-Dichloroethane	4300	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
1,2-Dichloropropane	9400	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
1,3,5-Trimethylbenzene	7800000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 UJ	1.2 U	
1,3-Dichloropropane	16000000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
1,4-Dichlorobenzene	24000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
2-Butanone	280000000	ug/kg	7.5 U	7/19/2019	7.5 U	X	6 U	X	5.9 U	6 U	5.8 U	6.2 U	
2-chlorotoluene	16000000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
2-Hexanone	2100000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
4-Chlorotoluene	16000000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
4-methyl-2-pentanone	53000000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
Acetone	610000000	ug/kg	32	7/19/2019	7.5 U	30 J	33 J	30 J	10 J	4 J	33 J	35	
Benzene	11000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
Bromobenzene	3000000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 UJ	2.5 U	
Bromochloromethane	1600000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
Bromodichloromethane	2700	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
Bromoform	620000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
Bromomethane	73000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
Carbon Disulfide	8200000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
Carbon Tetrachloride	6100	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	
Chlorobenzene	2900000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
Chloroform	2900	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
Chloromethane	1200000	ug/kg	1.5 U	7/19/2019	1.5 U	X	1.2 U	X	1.2 U				
Cis-1,2-Dichloroethene	1600000	ug/kg	3 U	7/19/2019	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.5 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT C4		DUT C4		DUT C5		DUT C5		DUT D1		DUT D1	
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/19/2019	1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Dibromomethane	250000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.3 U	2.5 U	
Dichlorodifluoromethane	940000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.3 U	2.5 U	
Ethylbenzene	54000	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
Hexachlorobutadiene	62000	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
m-,p-Xylene		ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.3 U	2.5 U	
Methyl tert-butyl ether (MTBE)	430000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.3 U	2.5 U	
Methylene chloride	560000	ug/kg			15	16	19 J	11	22 J	10	9.6 J	9.9 J	9.9 J	13		
n-Butylbenzene	39000000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.5 U		
n-Propylbenzene	34000000	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
o-Xylene	6900000	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
Styrene	63000000	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
Tetrachloroethene	220000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.5 U		
Toluene	50000000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.5 U		
Trans-1,2-Dichloroethene	1500000	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
Trans-1,3-Dichloropropene	17000	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.5 U		
Trichloroethene	9100	ug/kg			3 U	3 U	X	2.4 U	X	2.3 U	2.4 U	2.3 U	2.3 U	2.5 U		
Trichlorofluoromethane	7900000	ug/kg			1.5 U	1.5 U	X	1.2 UJ	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
Vinyl chloride	600	ug/kg			1.5 U	1.5 U	X	1.2 U	X	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT D2	DUT D2	DUT D2	DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D4
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,1,1-Trichloroethane	87000000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,1,2,2-Tetrachloroethane	5600	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,1,2-Trichloroethane	11000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,1-Dichloroethane	33000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,1-Dichloroethene	2400000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,2,3-Trichlorobenzene	490000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2,3-Trichloropropane	50	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2,4-Trichlorobenzene	220000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2,4-Trimethylbenzene	620000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2-Dibromo-3-chloropropane	54	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2-Dibromoethane	340	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,2-Dichlorobenzene	19000000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2-Dichloroethane	4300	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,2-Dichloropropane	9400	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,3,5-Trimethylbenzene	7800000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 UJ	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
1,3-Dichloropropane	16000000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
1,4-Dichlorobenzene	24000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
2-Butanone	280000000	ug/kg		5.8 U	6.3 U	7.1 U	6 U	6.5 U	6.8 U	7.4 U	6.7 U	6.9 U
2-chlorotoluene	16000000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
2-Hexanone	2100000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
4-Chlorotoluene	16000000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
4-methyl-2-pentanone	53000000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Acetone	610000000	ug/kg		35	39	51	19 J	22 J	4 J	33 UJ	27 U	28 UJ
Benzene	11000	ug/kg		1.2 J	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Bromobenzene	3000000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Bromochloromethane	1600000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Bromodichloromethane	2700	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Bromoform	620000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Bromomethane	73000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Carbon Disulfide	8200000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Carbon Tetrachloride	6100	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Chlorobenzene	2900000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Chloroform	2900	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Chloromethane	1200000	ug/kg		1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Cis-1,2-Dichloroethene	1600000	ug/kg		2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT D2	DUT D2	DUT D2	DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D4
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/19/2019	1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Dibromomethane	250000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Dichlorodifluoromethane	940000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Ethylbenzene	54000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Hexachlorobutadiene	62000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 UJ	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
m,p-Xylene		ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Methylene chloride	560000	ug/kg			10 J	9.3	11	7.6 J	9.4	11 J	16 U	11 U	14 U
n-Butylbenzene	39000000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 UJ	2.6 U	2.7 U	3 U	2.7 U	2.8 U
n-Propylbenzene	34000000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 UJ	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
o-Xylene	6900000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Styrene	63000000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Tetrachloroethene	220000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Toluene	50000000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Trans-1,2-Dichloroethene	1500000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Trans-1,3-Dichloropropene	17000	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Trichloroethene	9100	ug/kg			2.3 U	2.5 U	2.9 U	2.4 U	2.6 U	2.7 U	3 U	2.7 U	2.8 U
Trichlorofluoromethane	7900000	ug/kg			1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U
Vinyl chloride	600	ug/kg			1.2 U	1.3 U	1.4 U	1.2 U	1.3 U	1.4 U	1.5 U	1.3 U	1.4 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT D5	DUT D5	DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/22/2019	7/22/2019	7/22/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,1,1-Trichloroethane	87000000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,1,2,2-Tetrachloroethane	5600	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
1,1,2-Trichloroethane	11000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,1-Dichloroethane	33000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,1-Dichloroethene	2400000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,2,3-Trichlorobenzene	490000	ug/kg		2.4 U	2.3 U	2.6 U	5.3 U	6.6 UJ	6.7 U	5.6 U	6.2 U	5.6 U
1,2,3-Trichloropropane	50	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
1,2,4-Trichlorobenzene	220000	ug/kg		2.4 U	2.3 U	2.6 U	5.3 U	6.6 UJ	6.7 U	5.6 U	6.2 U	5.6 U
1,2,4-Trimethylbenzene	620000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
1,2-Dibromo-3-chloropropane	54	ug/kg		2.4 U	2.3 U	2.6 U	5.3 U	6.6 UJ	6.7 U	5.6 U	6.2 U	5.6 U
1,2-Dibromoethane	340	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,2-Dichlorobenzene	19000000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
1,2-Dichloroethane	4300	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,2-Dichloropropane	9400	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,3,5-Trimethylbenzene	7800000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
1,3-Dichloropropane	16000000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
1,4-Dichlorobenzene	24000	ug/kg		2.4 U	2.3 U	2.6 U	1.1 U	1.3 UJ	1.3 U	1.1 U	1.2 U	1.1 U
2-Butanone	280000000	ug/kg		6 U	X	6.4 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
2-chlorotoluene	16000000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
2-Hexanone	2100000	ug/kg		2.4 U	X	2.6 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
4-Chlorotoluene	16000000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
4-methyl-2-pentanone	53000000	ug/kg		2.4 U	X	2.6 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
Acetone	610000000	ug/kg		69 UJ	X	36 UJ	11 U	13 U	13 U	11 U	12 U	11 U
Benzene	11000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Bromobenzene	3000000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
Bromochloromethane	1600000	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Bromodichloromethane	2700	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Bromoform	620000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
Bromomethane	73000	ug/kg		2.4 U	2.3 UJ	2.6 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
Carbon Disulfide	8200000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Carbon Tetrachloride	6100	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Chlorobenzene	2900000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Chloroform	2900	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Chloromethane	1200000	ug/kg		1.2 U	1.1 UJ	1.3 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
Cis-1,2-Dichloroethene	1600000	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT D5	DUT D5	DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/22/2019	7/22/2019	7/22/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019
Dibromochloromethane	6800	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Dibromomethane	250000	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Dichlorodifluoromethane	940000	ug/kg		2.4 U	2.3 UJ	2.6 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
Ethylbenzene	54000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Hexachlorobutadiene	62000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
m-,p-Xylene		ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Methylene chloride	560000	ug/kg		9.8 U	2.3 UJ	11 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
n-Butylbenzene	39000000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
n-Propylbenzene	34000000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 UJ	3.4 U	2.8 U	3.1 U	2.8 U
o-Xylene	6900000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Styrene	63000000	ug/kg		1.2 U	1.1 U	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Tetrachloroethene	220000	ug/kg		2.4 U	2.3 U	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Toluene	50000000	ug/kg		2.4 U	2.3 UJ	2.6 U	5.3 U	6.6 U	6.7 U	5.6 U	6.2 U	5.6 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Trichloroethene	9100	ug/kg		2.4 U	2.3 UJ	2.6 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Trichlorofluoromethane	7900000	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U
Vinyl chloride	600	ug/kg		1.2 U	1.1 UJ	1.3 U	2.6 U	3.3 U	3.4 U	2.8 U	3.1 U	2.8 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT E3	DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
					7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/23/2019	7/23/2019	7/23/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,1,1-Trichloroethane	87000000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,1,2,2-Tetrachloroethane	5600	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,1,2-Trichloroethane	11000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,1-Dichloroethane	33000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,1-Dichloroethene	2400000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,2,3-Trichlorobenzene	490000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2,3-Trichloropropane	50	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2,4-Trichlorobenzene	220000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2,4-Trimethylbenzene	620000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2-Dibromo-3-chloropropane	54	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2-Dibromoethane	340	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,2-Dichlorobenzene	19000000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2-Dichloroethane	4300	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,2-Dichloropropane	9400	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,3,5-Trimethylbenzene	780000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
1,3-Dichloropropane	16000000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
1,4-Dichlorobenzene	24000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
2-Butanone	280000000	ug/kg			6.2 U	7 U	5.8 U	5.8 U	6.3 U	5.7 U	5.5 U	6.4 U	6.2 U
2-chlorotoluene	16000000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
2-Hexanone	2100000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
4-Chlorotoluene	16000000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
4-methyl-2-pentanone	53000000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Acetone	610000000	ug/kg			35 UJ	7 U	5.8 U	5.8 U	6.3 U	5.7 U	5.5 U	6.4 U	6.2 U
Benzene	11000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Bromobenzene	3000000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Bromochloromethane	1600000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Bromodichloromethane	2700	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Bromoform	620000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Bromomethane	73000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Carbon Disulfide	8200000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Carbon Tetrachloride	6100	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Chlorobenzene	2900000	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Chloroform	2900	ug/kg			1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Chloromethane	1200000	ug/kg			6.2 U	1.4 U	5.8 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Cis-1,2-Dichloroethene	1600000	ug/kg			2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT E3	DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
Dibromochloromethane	6800	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Dibromomethane	250000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Dichlorodifluoromethane	940000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Ethylbenzene	54000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Hexachlorobutadiene	62000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
m,p-Xylene		ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Methylene chloride	560000	ug/kg		13 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
n-Butylbenzene	39000000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
n-Propylbenzene	34000000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
o-Xylene	6900000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Styrene	63000000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Tetrachloroethene	220000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Toluene	50000000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Trichloroethene	9100	ug/kg		2.5 U	2.8 U	2.3 U	2.3 U	2.5 U	2.3 U	2.2 U	2.6 U	2.5 U
Trichlorofluoromethane	7900000	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U
Vinyl chloride	600	ug/kg		1.2 U	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.1 U	1.3 U	1.2 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3	DUT F3
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U	
1,1,1-Trichloroethane	87000000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
1,1,2-Trichloroethane	11000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
1,1-Dichloroethane	33000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
1,1-Dichloroethene	2400000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U	
1,2,3-Trichlorobenzene	490000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U	
1,2,3-Trichloropropane	50	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U	
1,2,4-Trichlorobenzene	220000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
1,2,4-Trimethylbenzene	620000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
1,2-Dibromo-3-chloropropane	54	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	38 U	2.8 U	
1,2-Dibromoethane	340	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U	
1,2-Dichlorobenzene	19000000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
1,2-Dichloroethane	4300	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U	
1,2-Dichloropropane	9400	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U	
1,3,5-Trimethylbenzene	780000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
1,3-Dichloropropane	16000000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
1,4-Dichlorobenzene	24000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
2-Butanone	280000000	ug/kg	5.7 U	5.7 U	6.1 U	5.4 U	6.2 U	6.2 U	5.4 U	33 J	7 U	
2-chlorotoluene	16000000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
2-Hexanone	2100000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	38 U	2.8 U	
4-Chlorotoluene	16000000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
4-methyl-2-pentanone	53000000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
Acetone	610000000	ug/kg	5.7 U	5.7 U	6.1 U	5.4 U	6.2 U	6.2 U	5.4 U	130 U	7 U	
Benzene	11000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
Bromobenzene	3000000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U	
Bromochloromethane	1600000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	38 U	2.8 U	
Bromodichloromethane	2700	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U	
Bromoform	620000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	38 U	1.4 U	
Bromomethane	73000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	38 U	2.8 U	
Carbon Disulfide	8200000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
Carbon Tetrachloride	6100	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U	
Chlorobenzene	2900000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U	
Chloroform	2900	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
Chloromethane	1200000	ug/kg	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U	
Cis-1,2-Dichloroethene	1600000	ug/kg	2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	38 U	2.8 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3	DUT F3
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
Dibromochloromethane	6800	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U
Dibromomethane	250000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U
Dichlorodifluoromethane	940000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	38 U	2.8 U
Ethylbenzene	54000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U
Hexachlorobutadiene	62000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U
m,p-Xylene		ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.3 U	2.3 U	2.4 UJ	2.2 UJ	2.5 UJ	2.5 UJ	2.2 UJ	9.5 U	2.8 UJ
Methylene chloride	560000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	24 J	2.8 U
n-Butylbenzene	39000000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U
n-Propylbenzene	34000000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U
o-Xylene	6900000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U
Styrene	63000000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	9.5 U	1.4 U
Tetrachloroethene	220000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U
Toluene	50000000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	8.8 J	2.8 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	9.5 U	2.8 U
Trichloroethene	9100	ug/kg		2.3 U	2.3 U	2.4 U	2.2 U	2.5 U	2.5 U	2.2 U	19 U	2.8 U
Trichlorofluoromethane	7900000	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	38 U	1.4 U
Vinyl chloride	600	ug/kg		1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	19 U	1.4 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT G1	DUT G1	DUT G1
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10
	Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,1,1-Trichloroethane	87000000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,1,2-Trichloroethane	11000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,1-Dichloroethane	33000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,1-Dichloroethene	2400000	ug/kg	1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,2,3-Trichlorobenzene	490000	ug/kg	2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2,3-Trichloropropane	50	ug/kg	2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2,4-Trichlorobenzene	220000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2,4-Trimethylbenzene	620000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2-Dibromo-3-chloropropane	54	ug/kg	2.2 U	33 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2-Dibromoethane	340	ug/kg	1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,2-Dichlorobenzene	19000000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2-Dichloroethane	4300	ug/kg	2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,2-Dichloropropane	9400	ug/kg	2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,3,5-Trimethylbenzene	780000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
1,3-Dichloropropane	16000000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
1,4-Dichlorobenzene	24000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
2-Butanone	280000000	ug/kg	5.4 U	29 J	5.2 U	5.2 U	5.3 U	5.3 U	5.8 U	6.8 U	6.4 U
2-chlorotoluene	16000000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
2-Hexanone	2100000	ug/kg	2.2 U	33 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
4-Chlorotoluene	16000000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
4-methyl-2-pentanone	53000000	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Acetone	610000000	ug/kg	5.4 U	110 U	5.2 U	5.2 U	5.3 U	5.3 U	5.8 U	6.8 U	6.4 U
Benzene	11000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Bromobenzene	3000000	ug/kg	2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Bromochloromethane	1600000	ug/kg	2.2 U	33 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Bromodichloromethane	2700	ug/kg	2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Bromoform	620000	ug/kg	1.1 U	33 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Bromomethane	73000	ug/kg	2.2 U	33 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Carbon Disulfide	8200000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Carbon Tetrachloride	6100	ug/kg	2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Chlorobenzene	2900000	ug/kg	1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Chloroform	2900	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Chloromethane	1200000	ug/kg	1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Cis-1,2-Dichloroethene	1600000	ug/kg	2.2 U	33 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT G1	DUT G1	DUT G1	
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	
Dibromochloromethane	6800	ug/kg		1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Dibromomethane	250000	ug/kg		2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Dichlorodifluoromethane	940000	ug/kg		2.2 U	33 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Ethylbenzene	54000	ug/kg		1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Hexachlorobutadiene	62000	ug/kg		1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
m-,p-Xylene		ug/kg		2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.2 UJ	8.1 U	2.1 UJ	2.1 UJ	2.1 UJ	2.1 UJ	2.3 UJ	2.7 UJ	2.5 UJ
Methylene chloride	560000	ug/kg		2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
n-Butylbenzene	39000000	ug/kg		2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
n-Propylbenzene	34000000	ug/kg		1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
o-Xylene	6900000	ug/kg		1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Styrene	63000000	ug/kg		1.1 U	8.1 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Tetrachloroethene	220000	ug/kg		2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Toluene	50000000	ug/kg		2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.2 U	8.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Trichloroethene	9100	ug/kg		2.2 U	16 U	2.1 U	2.1 U	2.1 U	2.1 U	2.3 U	2.7 U	2.5 U
Trichlorofluoromethane	7900000	ug/kg		1.1 U	33 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U
Vinyl chloride	600	ug/kg		1.1 U	16 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.4 U	1.3 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3	DUT G4	DUT G4	DUT G4
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	21 U
1,1,1-Trichloroethane	87000000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,1,2,2-Tetrachloroethane	5600	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,1,2-Trichloroethane	11000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,1-Dichloroethane	33000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,1-Dichloroethene	2400000	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
1,2,3-Trichlorobenzene	490000	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
1,2,3-Trichloropropane	50	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
1,2,4-Trichlorobenzene	220000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,2,4-Trimethylbenzene	620000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,2-Dibromo-3-chloropropane	54	ug/kg	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U	
1,2-Dibromoethane	340	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
1,2-Dichlorobenzene	19000000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,2-Dichloroethane	4300	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
1,2-Dichloropropane	9400	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
1,3,5-Trimethylbenzene	780000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,3-Dichloropropane	16000000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
1,4-Dichlorobenzene	24000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
2-Butanone	280000000	ug/kg	44 J	32 J	110 U	78 U	100 U	36 J	53 J	37 J	100 U	
2-chlorotoluene	16000000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
2-Hexanone	2100000	ug/kg	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U	
4-Chlorotoluene	16000000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
4-methyl-2-pentanone	53000000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
Acetone	610000000	ug/kg	140 U	120 U	150 U	100 U	140 U	130 U	140 U	120 U	140 U	
Benzene	11000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
Bromobenzene	3000000	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
Bromochloromethane	1600000	ug/kg	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U	
Bromodichloromethane	2700	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
Bromoform	620000	ug/kg	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U	
Bromomethane	73000	ug/kg	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U	
Carbon Disulfide	8200000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
Carbon Tetrachloride	6100	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
Chlorobenzene	2900000	ug/kg	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U	
Chloroform	2900	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
Chloromethane	1200000	ug/kg	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U	
Cis-1,2-Dichloroethene	1600000	ug/kg	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3	DUT G4	DUT G4	DUT G4
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/24/2019	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U
Dibromomethane	250000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Dichlorodifluoromethane	940000	ug/kg		7/24/2019	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U
Ethylbenzene	54000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Hexachlorobutadiene	62000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
m,p-Xylene		ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		7/24/2019	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U
Methylene chloride	560000	ug/kg		7/24/2019	37 J	15 J	21 J	16 U	28 J	16 J	22 J	18 U	15 J
n-Butylbenzene	39000000	ug/kg		7/24/2019	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U
n-Propylbenzene	34000000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
o-Xylene	6900000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Styrene	63000000	ug/kg		7/24/2019	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U
Tetrachloroethene	220000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Toluene	50000000	ug/kg		7/24/2019	16 J	18 U	7.4 J	16 U	7.9 J	19 U	21 U	18 U	21 U
Trans-1,2-Dichloroethene	1500000	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Trans-1,3-Dichloropropene	17000	ug/kg		7/24/2019	11 U	8.9 U	11 U	7.8 U	10 U	9.5 U	11 U	9.1 U	10 U
Trichloroethene	9100	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U
Trichlorofluoromethane	7900000	ug/kg		7/24/2019	42 U	36 U	44 U	31 U	42 U	38 U	43 U	37 U	42 U
Vinyl chloride	600	ug/kg		7/24/2019	21 U	18 U	22 U	16 U	21 U	19 U	21 U	18 U	21 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT G5	DUT G5	DUT G5	DUT H1	DUT H1	DUT H1	DUT H2	DUT H2	DUT H2
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
					7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,1,1-Trichloroethane	87000000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,1,2-Trichloroethane	11000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,1-Dichloroethane	33000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,1-Dichloroethene	2400000	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,2,3-Trichlorobenzene	490000	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,2,3-Trichloropropane	50	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,2,4-Trichlorobenzene	220000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,2,4-Trimethylbenzene	620000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,2-Dibromo-3-chloropropane	54	ug/kg	31 U		36 U	44 U	42 U	44 U	44 U	44 U	32 U	40 U	41 U
1,2-Dibromoethane	340	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,2-Dichlorobenzene	19000000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,2-Dichloroethane	4300	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,2-Dichloropropane	9400	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
1,3,5-Trimethylbenzene	780000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,3-Dichloropropane	16000000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
1,4-Dichlorobenzene	24000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
2-Butanone	280000000	ug/kg	33 J		91 U	110 U	100 U	110 U	110 U	110 U	39 J	80 U	47 J
2-chlorotoluene	16000000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
2-Hexanone	2100000	ug/kg	31 U		36 U	44 U	42 U	44 U	44 U	44 U	32 U	40 U	41 U
4-Chlorotoluene	16000000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
4-methyl-2-pentanone	53000000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
Acetone	610000000	ug/kg	100 U		120 U	150 U	140 U	150 U	150 U	150 U	110 U	130 U	140 U
Benzene	11000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
Bromobenzene	3000000	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
Bromochloromethane	1600000	ug/kg	31 U		36 U	44 U	42 U	44 U	44 U	44 U	32 U	40 U	41 U
Bromodichloromethane	2700	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
Bromoform	620000	ug/kg	31 U		36 U	44 U	42 U	44 U	44 U	44 U	32 U	40 U	41 U
Bromomethane	73000	ug/kg	31 U		36 U	44 U	42 U	44 U	44 U	44 U	32 U	40 U	41 U
Carbon Disulfide	8200000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
Carbon Tetrachloride	6100	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
Chlorobenzene	2900000	ug/kg	15 U		18 U	22 U	21 U	22 U	22 U	22 U	16 U	20 U	21 U
Chloroform	2900	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
Chloromethane	1200000	ug/kg	7.6 U		9.1 U	11 U	10 U	11 U	11 U	11 U	8 U	10 U	10 U
Cis-1,2-Dichloroethene	1600000	ug/kg	31 U		36 U	44 U	42 U	44 U	44 U	44 U	32 U	40 U	41 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT G5	DUT G5	DUT G5	DUT H1	DUT H1	DUT H1	DUT H2	DUT H2	DUT H2
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
Dibromochloromethane	6800	ug/kg	7.6 U	9.1 U	11 U	10 U	11 U	11 U	8 U	10 U	10 U	10 U
Dibromomethane	250000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Dichlorodifluoromethane	940000	ug/kg	31 U	36 U	44 U	42 U	44 U	44 U	32 U	40 U	41 U	
Ethylbenzene	54000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Hexachlorobutadiene	62000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
m-,p-Xylene		ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Methyl tert-butyl ether (MTBE)	430000	ug/kg	7.6 U	9.1 U	11 U	10 U	11 U	11 U	8 U	10 U	10 U	
Methylene chloride	560000	ug/kg	15 U	18 U	22 U	10 J	22 U	18 J	16 U	20 U	21 U	
n-Butylbenzene	39000000	ug/kg	7.6 U	9.1 U	11 U	10 U	11 U	11 U	8 U	10 U	10 U	
n-Propylbenzene	34000000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
o-Xylene	6900000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Styrene	63000000	ug/kg	7.6 U	9.1 U	11 U	10 U	11 U	11 U	8 U	10 U	10 U	
Tetrachloroethene	220000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Toluene	50000000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Trans-1,2-Dichloroethene	1500000	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Trans-1,3-Dichloropropene	17000	ug/kg	7.6 U	9.1 U	11 U	10 U	11 U	11 U	8 U	10 U	10 U	
Trichloroethene	9100	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	
Trichlorofluoromethane	7900000	ug/kg	31 U	36 U	44 U	42 U	44 U	44 U	32 U	40 U	41 U	
Vinyl chloride	600	ug/kg	15 U	18 U	22 U	21 U	22 U	22 U	16 U	20 U	21 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT H3	DUT H3	DUT H3	DUT H4	DUT H4	DUT H4	DUT H5	DUT H5	DUT H5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,1,1-Trichloroethane	87000000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,1,2,2-Tetrachloroethane	5600	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,1,2-Trichloroethane	11000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,1-Dichloroethane	33000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,1-Dichloroethene	2400000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,2,3-Trichlorobenzene	490000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2,3-Trichloropropane	50	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2,4-Trichlorobenzene	220000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2,4-Trimethylbenzene	620000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2-Dibromo-3-chloropropane	54	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2-Dibromoethane	340	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,2-Dichlorobenzene	19000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2-Dichloroethane	4300	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,2-Dichloropropane	9400	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,3,5-Trimethylbenzene	7800000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
1,3-Dichloropropane	16000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
1,4-Dichlorobenzene	24000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
2-Butanone	280000000	ug/kg		6.7 UJ	6.4 U	6.3 U	6.8 U	5.3 U	5.8 U	5 U	5.3 U	7 U
2-chlorotoluene	16000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
2-Hexanone	2100000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
4-Chlorotoluene	16000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
4-methyl-2-pentanone	53000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Acetone	610000000	ug/kg		6.7 UJ	6.4 UJ	4.8 J	6.8 UJ	5.3 UJ	5.8 UJ	5 UJ	5.3 UJ	3.5 J
Benzene	11000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Bromobenzene	3000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Bromochloromethane	1600000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Bromodichloromethane	2700	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Bromoform	620000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Bromomethane	73000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Carbon Disulfide	8200000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Carbon Tetrachloride	6100	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Chlorobenzene	2900000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Chloroform	2900	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Chloromethane	1200000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Cis-1,2-Dichloroethene	1600000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT H3	DUT H3	DUT H3	DUT H4	DUT H4	DUT H4	DUT H5	DUT H5	DUT H5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
Dibromochloromethane	6800	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Dibromomethane	250000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Dichlorodifluoromethane	940000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Ethylbenzene	54000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Hexachlorobutadiene	62000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
m-,p-Xylene		ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Methylene chloride	560000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
n-Butylbenzene	39000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
n-Propylbenzene	34000000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
o-Xylene	6900000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Styrene	63000000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Tetrachloroethene	220000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Toluene	50000000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Trichloroethene	9100	ug/kg		2.7 UJ	2.5 U	2.5 U	2.7 U	2.1 U	2.3 U	2 U	2.1 U	2.8 U
Trichlorofluoromethane	7900000	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U
Vinyl chloride	600	ug/kg		1.3 UJ	1.3 U	1.3 U	1.4 U	1.1 U	1.2 U	0.99 U	1.1 U	1.4 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT I1	DUT I1	DUT I1	DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,1,1-Trichloroethane	87000000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,1,2-Trichloroethane	11000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,1-Dichloroethane	33000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,1-Dichloroethene	2400000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,2,3-Trichlorobenzene	490000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2,3-Trichloropropane	50	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2,4-Trichlorobenzene	220000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2,4-Trimethylbenzene	620000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2-Dibromo-3-chloropropane	54	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2-Dibromoethane	340	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,2-Dichlorobenzene	19000000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2-Dichloroethane	4300	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,2-Dichloropropane	9400	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,3,5-Trimethylbenzene	780000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
1,3-Dichloropropane	16000000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
1,4-Dichlorobenzene	24000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
2-Butanone	280000000	ug/kg	5.5 U	6.7 U	6.7 J	5.2 U	5.3 J	6.6 U	6.4 U	6.7 U	6.7 U	6.7 U
2-chlorotoluene	16000000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
2-Hexanone	2100000	ug/kg	2.6 J	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
4-Chlorotoluene	16000000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
4-methyl-2-pentanone	53000000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
Acetone	610000000	ug/kg	5.5 UJ	2.6 J	130 J	5.2 UJ	10 J	2.8 J	6.4 UJ	4.3 J	6.7 UJ	
Benzene	11000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
Bromobenzene	3000000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
Bromochloromethane	1600000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
Bromodichloromethane	2700	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
Bromoform	620000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
Bromomethane	73000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
Carbon Disulfide	8200000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
Carbon Tetrachloride	6100	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U
Chlorobenzene	2900000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
Chloroform	2900	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
Chloromethane	1200000	ug/kg	1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U				
Cis-1,2-Dichloroethene	1600000	ug/kg	2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U	2.7 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT I1	DUT I1	DUT I1	DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
Dibromochloromethane	6800	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Dibromomethane	250000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Dichlorodifluoromethane	940000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Ethylbenzene	54000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Hexachlorobutadiene	62000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
m-,p-Xylene		ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Methylene chloride	560000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
n-Butylbenzene	39000000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
n-Propylbenzene	34000000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
o-Xylene	6900000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Styrene	63000000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Tetrachloroethene	220000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Toluene	50000000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Trichloroethene	9100	ug/kg		2.2 U	2.7 U	5.4 UJ	2.1 U	2.4 U	2.6 U	2.6 U	2.7 U	2.7 U
Trichlorofluoromethane	7900000	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Vinyl chloride	600	ug/kg		1.1 U	1.3 U	2.7 UJ	1 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT I4	DUT I4	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1	
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
					7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	
1,1,1,2-Tetrachloroethane	19000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,1,1-Trichloroethane	87000000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,1,2,2-Tetrachloroethane	5600	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,1,2-Trichloroethane	11000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,1-Dichloroethane	33000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,1-Dichloroethene	2400000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,2,3-Trichlorobenzene	490000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2,3-Trichloropropane	50	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2,4-Trichlorobenzene	220000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2,4-Trimethylbenzene	620000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2-Dibromo-3-chloropropane	54	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2-Dibromoethane	340	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,2-Dichlorobenzene	19000000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2-Dichloroethane	4300	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,2-Dichloropropane	9400	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,3,5-Trimethylbenzene	780000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
1,3-Dichloropropane	16000000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
1,4-Dichlorobenzene	24000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
2-Butanone	280000000	ug/kg			5.9 U	5.7 U	6.9 U	5.3 U	5.5 U	6 U	5.8 U	5.5 U	7.4 U	
2-chlorotoluene	16000000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
2-Hexanone	2100000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
4-Chlorotoluene	16000000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
4-methyl-2-pentanone	53000000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
Acetone	610000000	ug/kg			5.9 UJ	3.2 J	4.1 J	3.1 J	3.7 J	6 UJ	5.8 UJ	7.5 J	7.4 UJ	
Benzene	11000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
Bromobenzene	3000000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
Bromochloromethane	1600000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
Bromodichloromethane	2700	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
Bromoform	620000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
Bromomethane	73000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
Carbon Disulfide	8200000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
Carbon Tetrachloride	6100	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	
Chlorobenzene	2900000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
Chloroform	2900	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
Chloromethane	1200000	ug/kg			1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.5 U
Cis-1,2-Dichloroethene	1600000	ug/kg			2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT I4	DUT I4	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019
Dibromochloromethane	6800	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
Dibromomethane	250000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Dichlorodifluoromethane	940000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Ethylbenzene	54000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
Hexachlorobutadiene	62000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
m-,p-Xylene		ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Methylene chloride	560000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
n-Butylbenzene	39000000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
n-Propylbenzene	34000000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
o-Xylene	6900000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
Styrene	63000000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
Tetrachloroethene	220000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Toluene	50000000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Trichloroethene	9100	ug/kg		2.4 U	2.3 U	2.8 U	2.1 U	2.2 U	2.4 U	2.3 U	2.2 U	3 U
Trichlorofluoromethane	7900000	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U
Vinyl chloride	600	ug/kg		1.2 U	1.1 U	1.4 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT J2	DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,1,1-Trichloroethane	87000000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,1,2,2-Tetrachloroethane	5600	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,1,2-Trichloroethane	11000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,1-Dichloroethane	33000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,1-Dichloroethene	2400000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,2,3-Trichlorobenzene	490000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
1,2,3-Trichloropropane	50	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,2,4-Trichlorobenzene	220000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
1,2,4-Trimethylbenzene	620000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,2-Dibromo-3-chloropropane	54	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
1,2-Dibromoethane	340	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,2-Dichlorobenzene	19000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,2-Dichloroethane	4300	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,2-Dichloropropane	9400	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,3,5-Trimethylbenzene	780000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
1,3-Dichloropropane	16000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
1,4-Dichlorobenzene	24000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	1.3 U	1.1 U	1.3 U
2-Butanone	280000000	ug/kg		5.3 U	5.3 U	7.1 U	5.5 U	5.5 U	6.3 U	6.7 U	5.5 U	6.3 U
2-chlorotoluene	16000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
2-Hexanone	2100000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
4-Chlorotoluene	16000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
4-methyl-2-pentanone	53000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
Acetone	610000000	ug/kg		5.5 J	5.3 UJ	7.1 UJ	5.5 UJ	5.5 UJ	6.3 UJ	13 U	11 U	13 U
Benzene	11000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Bromobenzene	3000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Bromochloromethane	1600000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Bromodichloromethane	2700	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Bromoform	620000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Bromomethane	73000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
Carbon Disulfide	8200000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Carbon Tetrachloride	6100	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Chlorobenzene	2900000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Chloroform	2900	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Chloromethane	1200000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	6.7 U	5.5 U	6.3 U
Cis-1,2-Dichloroethene	1600000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT J2	DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019
Dibromochloromethane	6800	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Dibromomethane	250000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Dichlorodifluoromethane	940000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
Ethylbenzene	54000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Hexachlorobutadiene	62000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
m-,p-Xylene		ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Methylene chloride	560000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
n-Butylbenzene	39000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
n-Propylbenzene	34000000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
o-Xylene	6900000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Styrene	63000000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Tetrachloroethene	220000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Toluene	50000000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	6.7 U	5.5 U	6.3 U
Trans-1,2-Dichloroethene	1500000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Trichloroethene	9100	ug/kg		2.1 U	2.1 U	2.8 U	2.2 U	2.2 U	2.5 U	3.3 U	2.8 U	3.2 U
Trichlorofluoromethane	7900000	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U
Vinyl chloride	600	ug/kg		1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.3 U	3.3 U	2.8 U	3.2 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2	DUT K2	
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
					7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	
1,1,1,2-Tetrachloroethane	19000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,1,1-Trichloroethane	87000000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,1,2,2-Tetrachloroethane	5600	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,1,2-Trichloroethane	11000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,1-Dichloroethane	33000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,1-Dichloroethene	2400000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,2,3-Trichlorobenzene	490000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
1,2,3-Trichloropropane	50	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,2,4-Trichlorobenzene	220000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
1,2,4-Trimethylbenzene	620000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,2-Dibromo-3-chloropropane	54	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
1,2-Dibromoethane	340	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,2-Dichlorobenzene	19000000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,2-Dichloroethane	4300	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,2-Dichloropropane	9400	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,3,5-Trimethylbenzene	780000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,3-Dichloropropane	16000000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
1,4-Dichlorobenzene	24000	ug/kg	1.2 U		1.1 U	1.3 U	1.1 U	1.4 U	1.4 U	1.1 U	1.2 U	1.4 U		
2-Butanone	280000000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
2-chlorotoluene	16000000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
2-Hexanone	2100000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
4-Chlorotoluene	16000000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
4-methyl-2-pentanone	53000000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
Acetone	610000000	ug/kg	12 U		11 U	13 U	11 U	14 U	14 U	11 U	12 U	14 U		
Benzene	11000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Bromobenzene	3000000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Bromochloromethane	1600000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Bromodichloromethane	2700	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Bromoform	620000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Bromomethane	73000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
Carbon Disulfide	8200000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Carbon Tetrachloride	6100	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Chlorobenzene	2900000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Chloroform	2900	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		
Chloromethane	1200000	ug/kg	6.2 U		5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U		
Cis-1,2-Dichloroethene	1600000	ug/kg	3.1 U		2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U		

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2	DUT K2
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Dibromomethane	250000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Dichlorodifluoromethane	940000	ug/kg		7/29/2019	6.2 U	5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U
Ethylbenzene	54000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Hexachlorobutadiene	62000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
m,p-Xylene		ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Methylene chloride	560000	ug/kg		7/29/2019	6.2 U	5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U
n-Butylbenzene	39000000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
n-Propylbenzene	34000000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
o-Xylene	6900000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Styrene	63000000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Tetrachloroethene	220000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Toluene	50000000	ug/kg		7/29/2019	6.2 U	5.4 U	6.3 U	5.4 U	7.1 U	6.9 U	5.4 U	6.1 U	7 U
Trans-1,2-Dichloroethene	1500000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Trans-1,3-Dichloropropene	17000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Trichloroethene	9100	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Trichlorofluoromethane	7900000	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U
Vinyl chloride	600	ug/kg		7/29/2019	3.1 U	2.7 U	3.2 U	2.7 U	3.6 U	3.4 U	2.7 U	3.1 U	3.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5	DUT K5	DUT K5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,1,1-Trichloroethane	87000000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,1,2-Trichloroethane	11000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,1-Dichloroethane	33000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,1-Dichloroethene	2400000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,2,3-Trichlorobenzene	490000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
1,2,3-Trichloropropane	50	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,2,4-Trichlorobenzene	220000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
1,2,4-Trimethylbenzene	620000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,2-Dibromo-3-chloropropane	54	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
1,2-Dibromoethane	340	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,2-Dichlorobenzene	19000000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,2-Dichloroethane	4300	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,2-Dichloropropane	9400	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,3,5-Trimethylbenzene	780000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,3-Dichloropropane	16000000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
1,4-Dichlorobenzene	24000	ug/kg	1.3 U	1.3 U	1.2 U	1.1 U	1.3 U	1.3 U	1 U	1.3 U	1.3 U	1.3 U
2-Butanone	280000000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
2-chlorotoluene	16000000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
2-Hexanone	2100000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
4-Chlorotoluene	16000000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
4-methyl-2-pentanone	53000000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
Acetone	610000000	ug/kg	13 U	13 U	12 U	11 U	9.2 J	13 U	10 U	13 U	13 U	13 U
Benzene	11000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Bromobenzene	3000000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Bromochloromethane	1600000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Bromodichloromethane	2700	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Bromoform	620000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Bromomethane	73000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
Carbon Disulfide	8200000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Carbon Tetrachloride	6100	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Chlorobenzene	2900000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Chloroform	2900	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U
Chloromethane	1200000	ug/kg	6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U	6.3 U
Cis-1,2-Dichloroethene	1600000	ug/kg	3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U	3.2 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5	DUT K5	DUT K5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019
Dibromochloromethane	6800	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Dibromomethane	250000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Dichlorodifluoromethane	940000	ug/kg		6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U
Ethylbenzene	54000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Hexachlorobutadiene	62000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
m-,p-Xylene		ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Methylene chloride	560000	ug/kg		6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U
n-Butylbenzene	39000000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
n-Propylbenzene	34000000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
o-Xylene	6900000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Styrene	63000000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Tetrachloroethene	220000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Toluene	50000000	ug/kg		6.3 U	6.3 U	5.9 U	5.4 U	6.6 U	6.6 U	5.1 U	6.5 U	6.3 U
Trans-1,2-Dichloroethene	1500000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Trans-1,3-Dichloropropene	17000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Trichloroethene	9100	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Trichlorofluoromethane	7900000	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U
Vinyl chloride	600	ug/kg		3.2 U	3.2 U	3 U	2.7 U	3.3 U	3.3 U	2.6 U	3.3 U	3.2 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2	DUT L3	DUT L3	DUT L3
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
					7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,1,1-Trichloroethane	87000000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,1,2,2-Tetrachloroethane	5600	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
1,1,2-Trichloroethane	11000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,1-Dichloroethane	33000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,1-Dichloroethene	2400000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,2,3-Trichlorobenzene	490000	ug/kg	5.9 UJ		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 UJ	6.6 U	6.8 U
1,2,3-Trichloropropane	50	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
1,2,4-Trichlorobenzene	220000	ug/kg	5.9 UJ		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 UJ	6.6 U	6.8 U
1,2,4-Trimethylbenzene	620000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
1,2-Dibromo-3-chloropropane	54	ug/kg	5.9 UJ		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 UJ	6.6 U	6.8 U
1,2-Dibromoethane	340	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,2-Dichlorobenzene	19000000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
1,2-Dichloroethane	4300	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,2-Dichloropropane	9400	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,3,5-Trimethylbenzene	7800000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
1,3-Dichloropropane	16000000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
1,4-Dichlorobenzene	24000	ug/kg	1.2 UJ		1.1 U	1.3 U	1.2 U	1.2 U	1.3 U	1.2 U	1.3 UJ	1.3 U	1.4 U
2-Butanone	280000000	ug/kg	5.9 U		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.6 U	6.8 U
2-chlorotoluene	16000000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
2-Hexanone	2100000	ug/kg	5.9 U		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.6 U	6.8 U
4-Chlorotoluene	16000000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
4-methyl-2-pentanone	53000000	ug/kg	5.9 U		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.6 U	6.8 U
Acetone	610000000	ug/kg	12 U		11 U	13 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
Benzene	11000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Bromobenzene	3000000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
Bromochloromethane	1600000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Bromodichloromethane	2700	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Bromoform	620000	ug/kg	2.9 UJ		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.3 U	3.4 U
Bromomethane	73000	ug/kg	5.9 U		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.6 U	6.8 U
Carbon Disulfide	8200000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Carbon Tetrachloride	6100	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Chlorobenzene	2900000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Chloroform	2900	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U
Chloromethane	1200000	ug/kg	5.9 U		5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.6 U	6.8 U
Cis-1,2-Dichloroethene	1600000	ug/kg	2.9 U		2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.3 U	3.4 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID		DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2	DUT L3	DUT L3	DUT L3
			Depth (Feet)	Date	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Dibromochloromethane	6800	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Dibromomethane	250000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Dichlorodifluoromethane	940000	ug/kg		7/30/2019	5.9 U	5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.8 U
Ethylbenzene	54000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Hexachlorobutadiene	62000	ug/kg		7/30/2019	2.9 UJ	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.4 U
m-,p-Xylene		ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Methyl tert-butyl ether (MTBE)	430000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Methylene chloride	560000	ug/kg		7/30/2019	5.9 U	5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.8 U
n-Butylbenzene	39000000	ug/kg		7/30/2019	2.9 UJ	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.4 U
n-Propylbenzene	34000000	ug/kg		7/30/2019	2.9 UJ	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 UJ	3.4 U
o-Xylene	6900000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Styrene	63000000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Tetrachloroethene	220000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Toluene	50000000	ug/kg		7/30/2019	5.9 U	5.6 U	6.7 U	6.2 U	6.1 U	6.5 U	6 U	6.6 U	6.8 U
Trans-1,2-Dichloroethene	1500000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Trans-1,3-Dichloropropene	17000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Trichloroethene	9100	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Trichlorofluoromethane	7900000	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U
Vinyl chloride	600	ug/kg		7/30/2019	2.9 U	2.8 U	3.4 U	3.1 U	3 U	3.2 U	3 U	3.3 U	3.4 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT L4	DUT L4	DUT L4	DUT L5	DUT L5	DUT L5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15
		Date	7/30/2019	7/30/2019	7/30/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019
1,1,1,2-Tetrachloroethane	19000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 U
1,1,1-Trichloroethane	87000000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
1,1,2,2-Tetrachloroethane	5600	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
1,1,2-Trichloroethane	11000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 U
1,1-Dichloroethane	33000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
1,1-Dichloroethene	2400000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
1,2,3-Trichlorobenzene	490000	ug/kg		5.6 UJ	5.8 U	6.4 UJ	6 U	5.8 UJ	7 UJ
1,2,3-Trichloropropane	50	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
1,2,4-Trichlorobenzene	220000	ug/kg		5.6 UJ	5.8 U	6.4 UJ	6 U	5.8 UJ	7 UJ
1,2,4-Trimethylbenzene	620000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
1,2-Dibromo-3-chloropropane	54	ug/kg		5.6 UJ	5.8 U	6.4 UJ	6 U	5.8 UJ	7 UJ
1,2-Dibromoethane	340	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 U
1,2-Dichlorobenzene	19000000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
1,2-Dichloroethane	4300	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
1,2-Dichloropropene	9400	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
1,3,5-Trimethylbenzene	7800000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
1,3-Dichloropropane	16000000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 U
1,4-Dichlorobenzene	24000	ug/kg		1.1 UJ	1.2 U	1.3 UJ	1.2 U	1.2 UJ	1.4 UJ
2-Butanone	280000000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 U	7 U
2-chlorotoluene	16000000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
2-Hexanone	2100000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 UJ	7 U
4-Chlorotoluene	16000000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
4-methyl-2-pentanone	53000000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 UJ	7 U
Acetone	610000000	ug/kg		11 U	12 U	13 U	12 U	12 U	14 U
Benzene	11000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Bromobenzene	3000000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
Bromochloromethane	1600000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Bromodichloromethane	2700	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Bromoform	620000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
Bromomethane	73000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 U	7 U
Carbon Disulfide	8200000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Carbon Tetrachloride	6100	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Chlorobenzene	2900000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 UJ
Chloroform	2900	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Chloromethane	1200000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 U	7 U
Cis-1,2-Dichloroethene	1600000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 2
DUTRA VOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	Location ID	DUT L4	DUT L4	DUT L4	DUT L5	DUT L5	DUT L5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15
	Date		7/30/2019	7/30/2019	7/30/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019
Dibromochloromethane	6800	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 U
Dibromomethane	250000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Dichlorodifluoromethane	940000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 U	7 U
Ethylbenzene	54000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 UJ
Hexachlorobutadiene	62000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
m-,p-Xylene		ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 UJ
Methyl tert-butyl ether (MTBE)	430000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Methylene chloride	560000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 U	7 U
n-Butylbenzene	39000000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
n-Propylbenzene	34000000	ug/kg		2.8 UJ	2.9 U	3.2 UJ	3 U	2.9 UJ	3.5 UJ
o-Xylene	6900000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 UJ
Styrene	63000000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 UJ
Tetrachloroethene	220000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 UJ
Toluene	50000000	ug/kg		5.6 U	5.8 U	6.4 U	6 U	5.8 UJ	7 U
Trans-1,2-Dichloroethene	1500000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Trans-1,3-Dichloropropene	17000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 UJ	3.5 U
Trichloroethene	9100	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Trichlorofluoromethane	7900000	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U
Vinyl chloride	600	ug/kg		2.8 U	2.9 U	3.2 U	3 U	2.9 U	3.5 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3	DUT A3		
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15		
Sample Date	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019		
PAH Resample Date	N/A	N/A	N/A	N/A	N/A	06/23/20	N/A	N/A	06/23/20		
Chemical	CC	Units									
2-Methylnaphthalene	2300000	ug/kg	180 U	200 U	210 U	190 U	190 U	200 U	210 U	278 U	
Acenaphthene	34000000	ug/kg	180 U	200 U	210 U	190 U	190 U	65.6 U	200 U	210 U	83.3 U
Anthracene	170000000	ug/kg	180 U	200 U	210 U	190 U	190 U	65.6 U	200 U	210 U	83.3 U
Benzo(k)fluoranthene	1300	ug/kg	180 U	200 U	230 J	190 U	190 U	65.6 U	200 U	210 U	83.3 U
Benzo[a]anthracene	1300	ug/kg	180 U	200 U	210 J	190 U	190 U	65.6 U	200 U	210 U	50 J
Benzo[a]pyrene	330	ug/kg	180 U	130 J	790	190 U	190 U	40 J	200 U	210 U	142 J
Benzo[b]fluoranthene	1300	ug/kg	180 U	200 U	830	190 U	190 U	48 J	200 U	210 U	167 J
Chrysene	150000	ug/kg	180 U	200 U	460	190 U	190 U	65.6 U	200 U	210 U	69 J
Dibenz(a,h)anthracene	1100	ug/kg	180 U	200 U	210 U	190 U	190 U	65.6 U	200 U	210 U	83.3 U
Fluoranthene	23000000	ug/kg	180 U	130 J	650	190 U	190 U	65.6 U	200 U	210 U	150 J
Fluorene	23000000	ug/kg	180 U	200 U	210 U	190 U	190 U	65.6 U	200 U	210 U	83.3 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	180 U	160 J	930	190 U	190 U	68 J	200 U	210 U	235
Naphthalene	75000	ug/kg	180 U	200 U	210 U	190 U	190 U	219 U	200 U	210 U	278 U
Pyrene	17000000	ug/kg	180 U	190 J	1000	190 U	150 J	67 J	200 U	210 U	222
2,4,5-Trichlorophenol	61000000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2,4,6-Trichlorophenol	440000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2,4-Dichlorophenol	1800000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2,4-Dimethylphenol	12000000	ug/kg	360 U	390 U	420 U	390 U	370 U	3700 U	400 U	420 U	2000 U
2,4-Dinitrophenol	12000000	ug/kg	360 U	390 U	420 U	390 U	370 U	3700 U	400 U	420 U	2000 U
2,4-Dinitrotoluene	160000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2,6-Dinitrotoluene	610000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2-Chloronaphthalene	63000000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2-Chlorophenol	3900000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
2-Nitroaniline	6100000	ug/kg	360 U	390 U	420 U	390 U	370 U	3700 U	400 U	420 U	2000 U
3,3'-Dichlorobenzidine	11000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
4-Chloroaniline	24000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
4-Nitroaniline	240000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Benzoic acid	2400000000	ug/kg	710 U	770 U	830 U	770 U	740 U	7400 U	800 U	820 U	3900 U
Benzyl alcohol	6100000	ug/kg	400 U	430 U	460 U	430 U	410 U	4100 U	440 U	460 U	2200 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
bis(2-chloroethyl)ether	2100	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Dibenzofuran	780000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Diethyl phthalate	49000000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Di-n-butyl phthalate	61000000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Hexachlorobenzene	3000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Hexachlorobutadiene	62000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3	DUT A3	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	
PAH Resample Date		N/A	N/A	N/A	N/A	N/A	06/23/20	N/A	N/A	06/23/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Isophorone	5100000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Nitrobenzene	48000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
N-Nitrosodiphenylamine	990000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Pentachlorophenol	8900	ug/kg	180 U	64 J	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Phenanthrene	1300	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U
Phenol	180000000	ug/kg	180 U	200 U	210 U	190 U	190 U	1900 U	200 U	210 U	990 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2	DUT B2	DUT B2
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
PAH Resample Date	N/A	06/23/20	06/23/20	N/A	06/16/20	N/A	N/A	06/17/20	06/17/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	180 U	210 U	236 U	190 U	229 U	2100 U	180 U
Acenaphthene	34000000	ug/kg	180 U	62.9 U	70.8 U	190 U	68.8 U	2100 U	180 U
Anthracene	170000000	ug/kg	180 U	62.9 U	70.8 U	190 U	68.8 U	2100 U	180 U
Benzo(k)fluoranthene	1300	ug/kg	180 U	62.9 U	65 J	190 U	68.8 U	2100 U	180 U
Benzo[a]anthracene	1300	ug/kg	180 U	62.9 U	66 J	190 U	68.8 U	2100 U	180 U
Benzo[a]pyrene	330	ug/kg	180 U	62.9 U	192	190 U	51 J	2100 U	180 U
Benzo[b]fluoranthene	1300	ug/kg	180 U	62.9 U	231	190 U	49 J	2100 U	180 U
Chrysene	150000	ug/kg	180 U	62.9 U	94 J	190 U	68.8 U	2100 U	180 U
Dibenz(a,h)anthracene	1100	ug/kg	180 U	62.9 U	70.8 U	190 U	68.8 U	2100 U	180 U
Fluoranthene	23000000	ug/kg	180 U	62.9 U	222	190 U	62 J	2100 U	180 U
Fluorene	23000000	ug/kg	180 U	62.9 U	70.8 U	190 U	68.8 U	2100 U	180 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	180 U	62.9 U	315	190 U	49 J	2100 U	180 U
Naphthalene	75000	ug/kg	180 U	210 U	236 U	190 U	229 U	2100 U	180 U
Pyrene	17000000	ug/kg	180 U	62.9 U	319	190 U	76 J	2100 U	180 U
2,4,5-Trichlorophenol	61000000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2,4,6-Trichlorophenol	440000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2,4-Dichlorophenol	1800000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2,4-Dimethylphenol	12000000	ug/kg	360 U	4100 U	4300 U	370 U	2000 U	4300 U	360 U
2,4-Dinitrophenol	12000000	ug/kg	360 U	4100 U	4300 U	370 U	2000 U	4300 U	360 U
2,4-Dinitrotoluene	160000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2,6-Dinitrotoluene	610000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2-Chloronaphthalene	63000000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2-Chlorophenol	3900000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
2-Nitroaniline	6100000	ug/kg	360 U	4100 U	4300 U	370 U	2000 U	4300 U	360 U
3,3'-Dichlorobenzidine	11000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
4-Chloroaniline	24000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
4-Nitroaniline	240000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
Benzoic acid	2400000000	ug/kg	710 U	8100 U	8600 U	740 U	3900 U	8500 U	710 U
Benzyl alcohol	6100000	ug/kg	400 U	4500 U	4800 U	410 U	2200 U	4700 U	400 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
bis(2-chloroethyl)ether	2100	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
Dibenzofuran	780000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
Diethyl phthalate	49000000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
Di-n-butyl phthalate	61000000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
Hexachlorobenzene	3000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U
Hexachlorobutadiene	62000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2	DUT B2	DUT B2	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	
PAH Resample Date		N/A	06/23/20	06/23/20	N/A	06/16/20	N/A	N/A	06/17/20	06/17/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U
Isophorone	5100000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U
Nitrobenzene	48000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U
N-Nitrosodiphenylamine	990000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U
Pentachlorophenol	8900	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U
Phenanthrene	1300	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U
Phenol	180000000	ug/kg	180 U	2000 U	2200 U	190 U	990 U	2100 U	180 U	940 U	1000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4	DUT B5	DUT B5	DUT B5		
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15		
Sample Date	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019		
PAH Resample Date	N/A	N/A	N/A	N/A	N/A	06/18/20	N/A	N/A	06/18/20		
Chemical	CC	Units									
2-Methylnaphthalene	2300000	ug/kg	190 U	170 U	180 U	170 U	180 U	268 UJ	170 U	180 U	250 U
Acenaphthene	34000000	ug/kg	190 U	170 U	180 U	170 U	180 U	80.5 UJ	170 U	180 U	75.1 U
Anthracene	170000000	ug/kg	190 U	170 U	180 U	170 U	180 U	80.5 UJ	170 U	180 U	75.1 U
Benzo(k)fluoranthene	1300	ug/kg	190 U	170 U	180 U	170 U	180 U	80.5 U	170 U	180 U	75.1 U
Benzo[a]anthracene	1300	ug/kg	190 U	170 U	180 U	170 U	180 U	80.5 U	170 U	180 U	76 J
Benzo[a]pyrene	330	ug/kg	190 U	170 U	180 U	170 U	180 U	72 J	170 U	180 U	206
Benzo[b]fluoranthene	1300	ug/kg	190 U	170 U	180 U	170 U	180 U	88 J	170 U	180 U	241
Chrysene	150000	ug/kg	190 U	170 U	180 U	170 U	180 U	88 J	170 U	180 U	176
Dibenz(a,h)anthracene	1100	ug/kg	190 U	170 U	180 U	170 U	180 U	80.5 U	170 U	180 U	75.1 U
Fluoranthene	23000000	ug/kg	190 U	170 U	180 U	170 U	180 U	138 J	170 U	180 U	275
Fluorene	23000000	ug/kg	190 U	170 U	180 U	170 U	180 U	80.5 UJ	170 U	180 U	75.1 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	140 J	170 U	130 J	170 U	180 U	79 J	170 U	180 U	231
Naphthalene	75000	ug/kg	190 U	170 U	180 U	170 U	180 U	184 J	170 U	180 U	250 U
Pyrene	17000000	ug/kg	130 J	170 U	110 J	170 U	180 U	119 J	170 U	180 U	298
2,4,5-Trichlorophenol	61000000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2,4,6-Trichlorophenol	440000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2,4-Dichlorophenol	1800000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2,4-Dimethylphenol	12000000	ug/kg	380 U	350 U	360 U	340 U	350 U	3900 U	340 U	360 U	3800 U
2,4-Dinitrophenol	1200000	ug/kg	1900 U	1700 U	1800 U	1700 U	1700 U	7900 U	340 U	1800 U	3800 U
2,4-Dinitrotoluene	16000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2,6-Dinitrotoluene	610000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2-Chloronaphthalene	63000000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2-Chlorophenol	3900000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
2-Nitroaniline	6100000	ug/kg	380 U	350 U	360 U	340 U	350 U	3900 U	340 U	360 U	3800 U
3,3'-Dichlorobenzidine	11000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
4-Chloroaniline	24000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
4-Nitroaniline	240000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Benzoic acid	2400000000	ug/kg	750 U	690 U	710 U	680 U	690 U	7800 U	670 U	710 U	7400 U
Benzyl alcohol	6100000	ug/kg	410 U	380 U	400 U	380 U	380 U	4300 U	370 U	400 U	4100 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
bis(2-chloroethyl)ether	2100	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Dibenzofuran	780000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Diethyl phthalate	49000000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Di-n-butyl phthalate	61000000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Hexachlorobenzene	3000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Hexachlorobutadiene	62000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4	DUT B5	DUT B5	DUT B5	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Isophorone	5100000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Nitrobenzene	48000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
N-Nitrosodiphenylamine	990000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Pentachlorophenol	8900	ug/kg	940 U	870 U	900 U	860 U	880 U	3900 U	170 U	900 U	1900 U
Phenanthrene	1300	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U
Phenol	180000000	ug/kg	190 U	170 U	180 U	170 U	180 U	2000 U	170 U	180 U	1900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT C1	DUT C1	DUT C1	DUT C2	DUT C2	DUT C2	DUT C3	DUT C3	DUT C3
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/19/2019	7/19/2019	7/19/2019
PAH Resample Date	N/A	06/16/20	N/A	N/A	N/A	06/17/20	06/17/20	06/17/20	06/17/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	180 U	226 U	4300 U	180 U	190 U	288 U	222 U
Acenaphthene	34000000	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	86.3 U	66.7 U
Anthracene	170000000	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	86.3 U	66.7 U
Benzo(k)fluoranthene	1300	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	86.3 U	66.7 U
Benzo[a]anthracene	1300	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	55 J	66.7 U
Benzo[a]pyrene	330	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	148 J	66.7 U
Benzo[b]fluoranthene	1300	ug/kg	180 U	38 J	4300 U	180 U	190 U	201	66.7 U
Chrysene	150000	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	112 J	66.7 U
Dibenz(a,h)anthracene	1100	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	86.3 U	66.7 U
Fluoranthene	23000000	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	193	66.7 U
Fluorene	23000000	ug/kg	180 U	67.8 U	4300 U	180 U	190 U	86.3 U	66.7 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	180 U	67.8 U	4300 U	130 J	120 J	161 J	66.7 U
Naphthalene	75000	ug/kg	180 U	226 U	4300 U	180 U	190 U	288 U	222 U
Pyrene	17000000	ug/kg	180 U	67 J	4300 U	130 J	190 U	247	66.7 U
2,4,5-Trichlorophenol	61000000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2,4,6-Trichlorophenol	440000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2,4-Dichlorophenol	1800000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2,4-Dimethylphenol	12000000	ug/kg	350 U	3600 U	8500 U	370 U	370 U	3800 U	1700 U
2,4-Dinitrophenol	12000000	ug/kg	1800 U	7300 U	21000 U	1800 U	1900 U	19000 U	3500 U
2,4-Dinitrotoluene	16000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2,6-Dinitrotoluene	610000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2-Chloronaphthalene	63000000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2-Chlorophenol	3900000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
2-Nitroaniline	6100000	ug/kg	350 U	3600 U	8500 U	370 U	370 U	3800 U	1700 U
3,3'-Dichlorobenzidine	11000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
4-Chloroaniline	24000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
4-Nitroaniline	240000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
Benzoic acid	2400000000	ug/kg	700 U	7200 U	17000 U	730 U	740 U	7500 U	3500 U
Benzyl alcohol	6100000	ug/kg	390 U	4000 U	9400 U	410 U	410 U	4200 U	1900 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
bis(2-chloroethyl)ether	2100	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
Dibenzofuran	780000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
Diethyl phthalate	49000000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
Di-n-butyl phthalate	61000000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
Hexachlorobenzene	3000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U
Hexachlorobutadiene	62000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT C1	DUT C1	DUT C1	DUT C2	DUT C2	DUT C2	DUT C3	DUT C3	DUT C3	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/19/2019	7/19/2019	7/19/2019	
PAH Resample Date		N/A	06/16/20	N/A	N/A	N/A	06/17/20	06/17/20	06/17/20	06/17/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U	890 U	3800 U
Isophorone	5100000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U	890 U	3800 U
Nitrobenzene	48000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U	890 U	3800 U
N-Nitrosodiphenylamine	990000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U	890 U	3800 U
Pentachlorophenol	8900	ug/kg	880 U	3600 U	11000 U	920 U	930 U	9500 U	880 U	890 U	3800 U
Phenanthrene	1300	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U	890 U	3800 U
Phenol	18000000	ug/kg	180 U	1800 U	4300 U	180 U	190 U	1900 U	880 U	890 U	3800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT C4	DUT C4	DUT C4	DUT C5	DUT C5	DUT C5	DUT D1	DUT D1	DUT D1
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019
PAH Resample Date	06/18/20	06/18/20	06/18/20	N/A	06/24/20	N/A	06/16/20	N/A	06/16/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	213 U	216 U	261 U	180 U	209 U	1900 U	223 UJ
Acenaphthene	34000000	ug/kg	63.8 U	64.7 U	78.3 U	180 U	62.6 U	1900 U	66.8 UJ
Anthracene	170000000	ug/kg	63.8 U	64.7 U	78.3 U	180 U	62.6 U	1900 U	66.8 UJ
Benzo(k)fluoranthene	1300	ug/kg	63.8 U	64.7 U	57 J	180 U	62.6 U	1900 U	66.8 U
Benzo[a]anthracene	1300	ug/kg	63.8 U	64.7 U	89 J	180 U	62.6 U	1900 U	66.8 U
Benzo[a]pyrene	330	ug/kg	63.8 U	64.7 U	260	180 U	62.6 U	1900 U	66.8 U
Benzo[b]fluoranthene	1300	ug/kg	63.8 U	38 J	299	180 U	62.6 U	1900 U	66.8 U
Chrysene	150000	ug/kg	63.8 U	64.7 U	148 J	180 U	62.6 U	1900 U	66.8 U
Dibenz(a,h)anthracene	1100	ug/kg	63.8 U	64.7 U	78.3 U	180 U	62.6 U	1900 U	66.8 U
Fluoranthene	23000000	ug/kg	63.8 U	64.7 U	295	180 U	62.6 U	1900 U	66.8 U
Fluorene	23000000	ug/kg	63.8 U	64.7 U	78.3 U	180 U	62.6 U	1900 U	66.8 UJ
Indeno[1,2,3-cd]pyrene	1300	ug/kg	63.8 U	64.7 U	283	180 U	62.6 U	1900 U	66.8 U
Naphthalene	75000	ug/kg	213 U	216 U	261 U	180 U	209 U	1900 U	223 UJ
Pyrene	17000000	ug/kg	49 J	51 J	401	180 U	62.6 U	1900 U	66.8 U
2,4,5-Trichlorophenol	61000000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 UJ	1900 U	910 U
2,4,6-Trichlorophenol	440000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 UJ	1900 U	910 U
2,4-Dichlorophenol	1800000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
2,4-Dimethylphenol	12000000	ug/kg	3900 U	4000 U	3900 U	360 U	20000 U	3700 U	1800 U
2,4-Dinitrophenol	12000000	ug/kg	7900 U	8000 U	7800 U	1800 U	40000 UJ	7400 U	3600 U
2,4-Dinitrotoluene	16000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
2,6-Dinitrotoluene	610000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
2-Chloronaphthalene	63000000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
2-Chlorophenol	3900000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
2-Nitroaniline	6100000	ug/kg	3900 U	4000 U	3900 U	360 U	20000 U	3700 U	1800 U
3,3'-Dichlorobenzidine	11000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
4-Chloroaniline	24000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
4-Nitroaniline	240000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
Benzoic acid	2400000000	ug/kg	7800 U	7900 U	7700 U	700 U	40000 U	7300 U	3600 U
Benzyl alcohol	6100000	ug/kg	4400 U	4400 U	4300 U	390 U	22000 U	4100 U	2000 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
bis(2-chloroethyl)ether	2100	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
Dibenzofuran	780000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
Diethyl phthalate	49000000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
Di-n-butyl phthalate	61000000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
Hexachlorobenzene	3000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
Hexachlorobutadiene	62000	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U
									180 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT C4	DUT C4	DUT C4	DUT C5	DUT C5	DUT C5	DUT D1	DUT D1	DUT D1
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date		7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019
PAH Resample Date		06/18/20	06/18/20	06/18/20	N/A	06/24/20	N/A	06/16/20	N/A	06/16/20
Chemical	CC	Units								
Hexachloroethane	120000	ug/kg	2000 U	2000 U	180 U	10000 U	1900 U	910 U	180 UJ	3700 U
Isophorone	5100000	ug/kg	2000 U	2000 U	180 U	10000 U	1900 U	910 U	180 UJ	3700 U
Nitrobenzene	48000	ug/kg	2000 U	2000 U	180 U	10000 U	1900 U	910 U	180 UJ	3700 U
N-Nitrosodiphenylamine	990000	ug/kg	2000 U	2000 U	180 U	10000 U	1900 U	910 U	180 UJ	3700 U
Pentachlorophenol	8900	ug/kg	2000 U	2000 U	180 U	10000 UJ	1900 U	910 U	180 U	3700 U
Phenanthrene	1300	ug/kg	2000 U	2000 U	2000 U	180 U	10000 U	1900 U	910 U	180 UJ
Phenol	180000000	ug/kg	2000 U	2000 U	180 U	10000 U	1900 U	910 U	180 U	3700 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT D2	DUT D2	DUT D2	DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D4
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date		7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/22/2019	7/22/2019	7/22/2019
Chemical	CC	Units								
2-Methylnaphthalene	2300000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	215 U
Acenaphthene	34000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Anthracene	170000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Benzo(k)fluoranthene	1300	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Benzo[a]anthracene	1300	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Benzo[a]pyrene	330	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Benzo[b]fluoranthene	1300	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Chrysene	150000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Dibenz(a,h)anthracene	1100	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Fluoranthene	23000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Fluorene	23000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
Naphthalene	75000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	215 U
Pyrene	17000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	64.4 U
2,4,5-Trichlorophenol	61000000	ug/kg	170 U	170 U	11000 UJ	170 U	180 U	10000 UJ	190 U	3900 U
2,4,6-Trichlorophenol	440000	ug/kg	170 U	170 U	11000 UJ	170 U	180 U	10000 UJ	190 U	3900 U
2,4-Dichlorophenol	1800000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
2,4-Dimethylphenol	12000000	ug/kg	340 U	350 U	21000 U	350 U	360 U	20000 U	370 U	7700 U
2,4-Dinitrophenol	12000000	ug/kg	1700 U	1700 U	42000 U	1700 U	1800 U	41000 UJ	370 U	7700 U
2,4-Dinitrotoluene	160000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
2,6-Dinitrotoluene	610000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
2-Chloronaphthalene	63000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
2-Chlorophenol	3900000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
2-Nitroaniline	6100000	ug/kg	340 U	350 U	21000 U	350 U	360 U	20000 U	370 U	7700 U
3,3'-Dichlorobenzidine	11000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
4-Chloroaniline	24000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
4-Nitroaniline	240000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
Benzoic acid	2400000000	ug/kg	670 U	690 U	42000 U	690 U	710 U	41000 U	740 U	15000 U
Benzyl alcohol	6100000	ug/kg	370 U	380 U	23000 U	380 U	400 U	23000 U	410 U	8500 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
bis(2-chloroethyl)ether	2100	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
Dibenzofuran	780000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
Diethyl phthalate	49000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
Di-n-butyl phthalate	61000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
Hexachlorobenzene	3000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U
Hexachlorobutadiene	62000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT D2	DUT D2	DUT D2	DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D4	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/22/2019	7/22/2019	7/22/2019	
PAH Resample Date		N/A	N/A	N/A	N/A	N/A	N/A	N/A	06/18/20	06/18/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U	4000 U
Isophorone	5100000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U	4000 U
Nitrobenzene	48000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U	4000 U
N-Nitrosodiphenylamine	990000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U	4000 U
Pentachlorophenol	8900	ug/kg	170 U	170 U	11000 UJ	170 U	180 U	10000 UJ	190 U	3900 U	4000 U
Phenanthrene	1300	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U	4000 U
Phenol	180000000	ug/kg	170 U	170 U	11000 U	170 U	180 U	10000 U	190 U	3900 U	4000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT D5	DUT D5	DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/22/2019	7/22/2019	7/22/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019
PAH Resample Date	06/18/20	N/A	06/18/20	06/16/20	06/16/20	N/A	06/17/20	06/17/20	06/17/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	306 U	9000 U	261 U	216 U	205 U	4300 U	231 U
Acenaphthene	34000000	ug/kg	91.7 U	9000 U	78.3 U	64.8 U	61.6 U	4300 U	69.3 U
Anthracene	170000000	ug/kg	91.7 U	9000 U	78.3 U	64.8 U	61.6 U	4300 U	69.3 U
Benzo(k)fluoranthene	1300	ug/kg	91.7 U	9000 U	141 J	64.8 U	61.6 U	4300 U	69.3 U
Benzo[a]anthracene	1300	ug/kg	91.7 U	9000 U	153 J	64.8 U	61.6 U	4300 U	69.3 U
Benzo[a]pyrene	330	ug/kg	91.7 U	9000 U	513	80 J	61.6 U	4300 U	69.3 U
Benzo[b]fluoranthene	1300	ug/kg	91.7 U	9000 U	596	101 J	38 J	4300 U	69.3 U
Chrysene	150000	ug/kg	91.7 U	9000 U	288	64.8 U	61.6 U	4300 U	69.3 U
Dibenz(a,h)anthracene	1100	ug/kg	91.7 U	9000 U	65 J	64.8 U	61.6 U	4300 U	69.3 U
Fluoranthene	23000000	ug/kg	91.7 U	9000 U	549	96 J	61.6 U	4300 U	69.3 U
Fluorene	23000000	ug/kg	91.7 U	9000 U	78.3 U	64.8 U	61.6 U	4300 U	69.3 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	91.7 U	9000 U	599	74 J	61.6 U	4300 U	69.3 U
Naphthalene	75000	ug/kg	144 J	9000 U	261 U	216 U	205 U	4300 U	231 U
Pyrene	17000000	ug/kg	91.7 U	9000 U	718	136	55 J	4300 U	69.3 U
2,4,5-Trichlorophenol	61000000	ug/kg	900 U	9000 UJ	1900 U	890 U	4100 U	4300 U	970 U
2,4,6-Trichlorophenol	440000	ug/kg	900 U	9000 UJ	1900 U	890 U	4100 U	4300 U	970 U
2,4-Dichlorophenol	1800000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
2,4-Dimethylphenol	12000000	ug/kg	1800 U	18000 U	3700 U	1800 U	8200 U	8700 U	1900 U
2,4-Dinitrophenol	1200000	ug/kg	1800 U	18000 UJ	3700 U	1800 U	8200 U	8700 U	1900 U
2,4-Dinitrotoluene	16000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
2,6-Dinitrotoluene	610000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
2-Chloronaphthalene	63000000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
2-Chlorophenol	3900000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
2-Nitroaniline	6100000	ug/kg	1800 U	18000 U	3700 U	1800 U	8200 U	8700 U	1900 U
3,3'-Dichlorobenzidine	11000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
4-Chloroaniline	24000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
4-Nitroaniline	240000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
Benzoic acid	2400000000	ug/kg	3500 U	36000 U	7400 U	3500 U	16000 U	17000 U	3800 U
Benzyl alcohol	6100000	ug/kg	2000 U	20000 U	4100 U	2000 U	9000 U	9500 U	2100 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
bis(2-chloroethyl)ether	2100	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
Dibenzofuran	780000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
Diethyl phthalate	49000000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
Di-n-butyl phthalate	61000000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
Hexachlorobenzene	3000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U
Hexachlorobutadiene	62000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT D5	DUT D5	DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date		7/22/2019	7/22/2019	7/22/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019
PAH Resample Date		06/18/20	N/A	06/18/20	06/16/20	06/16/20	N/A	06/17/20	06/17/20	06/17/20
Chemical	CC	Units								
Hexachloroethane	120000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U	2000 U
Isophorone	5100000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U	2000 U
Nitrobenzene	48000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U	2000 U
N-Nitrosodiphenylamine	990000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U	2000 U
Pentachlorophenol	8900	ug/kg	900 U	9000 UJ	1900 U	890 U	4100 U	4300 U	970 U	2000 U
Phenanthrene	1300	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U	2000 U
Phenol	180000000	ug/kg	900 U	9000 U	1900 U	890 U	4100 U	4300 U	970 U	2000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT E3	DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/23/2019	7/23/2019	7/23/2019
PAH Resample Date	06/17/20	06/17/20	06/17/20	06/18/20	06/18/20	06/18/20	N/A	06/23/20	06/23/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	227 U	232 UJ	269 UJ	212 U	212 U	249 U	180 U
Acenaphthene	34000000	ug/kg	68.1 U	69.5 UJ	80.6 UJ	63.5 U	63.7 U	74.8 U	180 U
Anthracene	170000000	ug/kg	68.1 U	69.5 UJ	80.6 UJ	63.5 U	63.7 U	74.8 U	180 U
Benzo(k)fluoranthene	1300	ug/kg	68.1 U	69.5 UJ	76 J	63.5 U	63.7 U	84 J	180 U
Benzo[a]anthracene	1300	ug/kg	68.1 U	69.5 UJ	108 J	63.5 U	63.7 U	98 J	180 U
Benzo[a]pyrene	330	ug/kg	68.1 U	69.5 UJ	324 J	63.5 U	63.7 U	305	180 U
Benzo[b]fluoranthene	1300	ug/kg	68.1 U	69.5 UJ	421 J	63.5 U	63.7 U	353	180 U
Chrysene	150000	ug/kg	68.1 U	69.5 UJ	237 J	63.5 U	63.7 U	162	180 U
Dibenz(a,h)anthracene	1100	ug/kg	68.1 U	69.5 UJ	80.6 UJ	63.5 U	63.7 U	46 J	180 U
Fluoranthene	23000000	ug/kg	68.1 U	69.5 UJ	558 J	63.5 U	63.7 U	330	180 U
Fluorene	23000000	ug/kg	68.1 U	69.5 UJ	80.6 UJ	63.5 U	63.7 U	74.8 U	180 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	68.1 U	69.5 UJ	292 J	63.5 U	63.7 U	353	180 U
Naphthalene	75000	ug/kg	227 U	232 UJ	269 UJ	212 U	212 U	249 U	180 U
Pyrene	17000000	ug/kg	68.1 U	69.5 UJ	544 J	63.5 U	63.7 U	456	180 U
2,4,5-Trichlorophenol	61000000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 UJ	3800 U	180 U
2,4,6-Trichlorophenol	440000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 UJ	3800 U	180 U
2,4-Dichlorophenol	1800000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
2,4-Dimethylphenol	12000000	ug/kg	1900 U	8100 U	7600 U	2100 U	7900 U	7600 U	370 U
2,4-Dinitrophenol	12000000	ug/kg	1900 U	8100 U	7600 U	2100 U	7900 UJ	7600 U	370 U
2,4-Dinitrotoluene	160000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
2,6-Dinitrotoluene	610000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
2-Chloronaphthalene	63000000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
2-Chlorophenol	3900000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
2-Nitroaniline	6100000	ug/kg	1900 U	8100 U	7600 U	2100 U	7900 U	7600 U	370 U
3,3'-Dichlorobenzidine	11000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
4-Chloroaniline	24000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
4-Nitroaniline	240000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
Benzoic acid	2400000000	ug/kg	3700 U	16000 U	15000 U	4200 U	16000 U	15000 U	730 U
Benzyl alcohol	6100000	ug/kg	2000 U	9000 U	8400 U	2300 U	8700 U	8400 U	400 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
bis(2-chloroethyl)ether	2100	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
Dibenzofuran	780000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
Diethyl phthalate	49000000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
Di-n-butyl phthalate	61000000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
Hexachlorobenzene	3000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U
Hexachlorobutadiene	62000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT E3	DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/23/2019	7/23/2019	7/23/2019	
PAH Resample Date		06/17/20	06/17/20	06/17/20	06/18/20	06/18/20	06/18/20	N/A	06/23/20	06/23/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U	1900 U	3900 U
Isophorone	5100000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U	1900 U	3900 U
Nitrobenzene	48000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U	1900 U	3900 U
N-Nitrosodiphenylamine	990000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U	1900 U	3900 U
Pentachlorophenol	8900	ug/kg	930 U	4100 U	3800 U	1100 U	3900 UJ	3800 U	180 U	1900 U	3900 U
Phenanthrene	1300	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U	1900 U	3900 U
Phenol	180000000	ug/kg	930 U	4100 U	3800 U	1100 U	3900 U	3800 U	180 U	1900 U	3900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3	DUT F3		
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15		
Sample Date	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019		
PAH Resample Date	06/16/20	06/16/20	06/16/20	06/17/20	06/17/20	06/17/20	06/17/20	06/17/20	06/17/20		
Chemical	CC	Units									
2-Methylnaphthalene	2300000	ug/kg	214 U	290 U	267 U	268 U	216 U	259 U	213 U	278 U	254 U
Acenaphthene	34000000	ug/kg	64.3 U	87.1 U	80 U	80.3 U	64.8 U	77.8 U	63.9 U	83.4 U	76.2 U
Anthracene	170000000	ug/kg	64.3 U	87.1 U	80 U	80.3 U	64.8 U	77.8 U	63.9 U	83.4 U	76.2 U
Benzo(k)fluoranthene	1300	ug/kg	64.3 U	87.1 U	83 J	80.3 U	64.8 U	153 J	63.9 U	83.4 U	57 J
Benzo[a]anthracene	1300	ug/kg	64.3 U	87.1 U	104 J	80.3 U	64.8 U	192	63.9 U	83.4 U	83 J
Benzo[a]pyrene	330	ug/kg	64.3 U	87.1 U	336	80.3 U	64.8 U	584	63.9 U	83.4 U	268
Benzo[b]fluoranthene	1300	ug/kg	64.3 U	87.1 U	357	80.3 U	64.8 U	786	63.9 U	83.4 U	274
Chrysene	150000	ug/kg	64.3 U	87.1 U	155 J	80.3 U	64.8 U	359	63.9 U	83.4 U	133 J
Dibenz(a,h)anthracene	1100	ug/kg	64.3 U	87.1 U	80 U	80.3 U	64.8 U	74 J	63.9 U	83.4 U	76.2 U
Fluoranthene	23000000	ug/kg	64.3 U	87.1 U	384	80.3 U	64.8 U	988	63.9 U	83.4 U	287
Fluorene	23000000	ug/kg	64.3 U	87.1 U	80 U	80.3 U	64.8 U	77.8 U	63.9 U	83.4 U	76.2 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	64.3 U	87.1 U	387	80.3 U	64.8 U	700	63.9 U	83.4 U	290
Naphthalene	75000	ug/kg	214 U	290 U	267 U	268 U	216 U	259 U	213 U	278 U	254 U
Pyrene	17000000	ug/kg	64.3 U	87.1 U	536	80.3 U	64.8 U	1,040	63.9 U	83.4 U	408
2,4,5-Trichlorophenol	61000000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2,4,6-Trichlorophenol	440000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2,4-Dichlorophenol	1800000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2,4-Dimethylphenol	12000000	ug/kg	1700 U	1800 U	7400 U	1800 U	8000 U	7700 U	1800 U	3800 U	7700 U
2,4-Dinitrophenol	1200000	ug/kg	1700 U	1800 U	7400 U	1800 U	8000 U	7700 U	1800 U	3800 U	7700 U
2,4-Dinitrotoluene	16000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2,6-Dinitrotoluene	610000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2-Chloronaphthalene	63000000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2-Chlorophenol	3900000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
2-Nitroaniline	6100000	ug/kg	1700 U	1800 U	7400 U	1800 U	8000 U	7700 U	1800 U	3800 U	7700 U
3,3'-Dichlorobenzidine	11000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
4-Chloroaniline	24000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
4-Nitroaniline	240000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Benzoic acid	2400000000	ug/kg	3400 U	3600 U	15000 U	3600 U	16000 U	15000 U	3500 U	7500 U	15000 U
Benzyl alcohol	6100000	ug/kg	1900 U	2000 U	8200 U	2000 U	8800 U	8500 U	2000 U	4200 U	8500 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
bis(2-chloroethyl)ether	2100	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Dibenzofuran	780000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Diethyl phthalate	49000000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Di-n-butyl phthalate	61000000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Hexachlorobenzene	3000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Hexachlorobutadiene	62000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3	DUT F3	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	
PAH Resample Date		06/16/20	06/16/20	06/16/20	06/17/20	06/17/20	06/17/20	06/17/20	06/17/20	06/17/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Isophorone	5100000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Nitrobenzene	48000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
N-Nitrosodiphenylamine	990000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Pentachlorophenol	8900	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Phenanthrene	1300	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U
Phenol	180000000	ug/kg	870 U	910 U	3700 U	920 U	4000 U	3900 U	890 U	1900 U	3900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT F5	DUT G1	DUT G1	DUT G1
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
PAH Resample Date	06/18/20	06/18/20	06/18/20	N/A	06/23/20	06/23/20	06/16/20	06/16/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	280 U	226 U	240 U	170 U	211 U	305 U	212 U
Acenaphthene	34000000	ug/kg	83.9 U	67.7 U	72 U	170 U	63.4 U	91.5 U	63.6 U
Anthracene	170000000	ug/kg	83.9 U	67.7 U	72 U	170 U	63.4 U	91.5 U	63.6 U
Benzo(k)fluoranthene	1300	ug/kg	83.9 U	67.7 U	90 J	170 U	63.4 U	91.5 U	63.6 U
Benzo[a]anthracene	1300	ug/kg	83.9 U	67.7 U	120 J	170 U	63.4 U	91.5 U	63.6 U
Benzo[a]pyrene	330	ug/kg	83.9 U	55 J	329	170 U	63.4 U	62 J	63.6 U
Benzo[b]fluoranthene	1300	ug/kg	83.9 U	70 J	327	170 U	63.4 U	72 J	63.6 U
Chrysene	150000	ug/kg	83.9 U	67.7 U	157	170 U	63.4 U	91.5 U	63.6 U
Dibenz(a,h)anthracene	1100	ug/kg	83.9 U	67.7 U	43 J	170 U	63.4 U	91.5 U	63.6 U
Fluoranthene	23000000	ug/kg	83.9 U	57 J	432	170 U	63.4 U	91.5 U	63.6 U
Fluorene	23000000	ug/kg	83.9 U	67.7 U	72 U	170 U	63.4 U	91.5 U	63.6 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	83.9 U	61 J	329	170 U	63.4 U	100 J	63.6 U
Naphthalene	75000	ug/kg	197 J	96 J	240 U	170 U	211 U	305 U	212 U
Pyrene	17000000	ug/kg	83.9 U	78 J	567	170 U	63.4 U	88 J	43 J
2,4,5-Trichlorophenol	61000000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2,4,6-Trichlorophenol	440000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2,4-Dichlorophenol	1800000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2,4-Dimethylphenol	12000000	ug/kg	1800 UJ	3500 U	3800 U	350 U	1700 U	3500 U	1800 U
2,4-Dinitrophenol	12000000	ug/kg	1800 UJ	3500 U	3800 U	350 U	1700 U	3500 U	1800 U
2,4-Dinitrotoluene	160000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2,6-Dinitrotoluene	610000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2-Chloronaphthalene	63000000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2-Chlorophenol	3900000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
2-Nitroaniline	6100000	ug/kg	1800 UJ	3500 U	3800 U	350 U	1700 U	3500 U	1800 U
3,3'-Dichlorobenzidine	11000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
4-Chloroaniline	24000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
4-Nitroaniline	240000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
Benzoic acid	2400000000	ug/kg	3600 UJ	7000 U	7500 U	690 U	3500 U	7000 U	3500 U
Benzyl alcohol	6100000	ug/kg	2000 UJ	3900 U	4200 U	380 U	1900 U	3900 U	2000 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
bis(2-chloroethyl)ether	2100	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
Dibenzofuran	780000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
Diethyl phthalate	49000000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
Di-n-butyl phthalate	61000000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
Hexachlorobenzene	3000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U
Hexachlorobutadiene	62000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT F5	DUT G1	DUT G1	DUT G1	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	
PAH Resample Date		06/18/20	06/18/20	06/18/20	N/A	06/23/20	06/23/20	06/16/20	06/16/20	N/A	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U
Isophorone	5100000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U
Nitrobenzene	48000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U
N-Nitrosodiphenylamine	990000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U
Pentachlorophenol	8900	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U
Phenanthrene	1300	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U
Phenol	18000000	ug/kg	900 UJ	1800 U	1900 U	170 U	880 U	1800 U	890 U	2000 U	3800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3	DUT G4	DUT G4	DUT G4
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
PAH Resample Date	06/24/20	06/17/20	06/17/20	06/17/20	06/24/20	N/A	06/18/20	06/24/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	210 U	247 UJ	258 U	209 U	277 U	4400 U	266 U
Acenaphthene	34000000	ug/kg	63 U	74 UJ	77.3 U	62.8 U	83 U	4400 U	79.8 U
Anthracene	170000000	ug/kg	63 U	74 UJ	77.3 U	62.8 U	83 U	4400 U	79.8 U
Benzo(k)fluoranthene	1300	ug/kg	63 U	74 UJ	148 J	62.8 U	83 U	4400 U	79.8 U
Benzo[a]anthracene	1300	ug/kg	63 U	74 UJ	177	62.8 U	83 U	4400 U	79.8 U
Benzo[a]pyrene	330	ug/kg	63 U	74 UJ	567	62.8 U	83 U	4400 U	79.8 U
Benzo[b]fluoranthene	1300	ug/kg	63 U	46 J	736	62.8 U	83 U	4400 U	79.8 U
Chrysene	150000	ug/kg	63 U	74 UJ	340	62.8 U	83 U	4400 U	79.8 U
Dibenz(a,h)anthracene	1100	ug/kg	63 U	74 UJ	64 J	62.8 U	83 U	4400 U	79.8 U
Fluoranthene	23000000	ug/kg	63 U	74 UJ	624	62.8 U	83 U	4400 U	79.8 U
Fluorene	23000000	ug/kg	63 U	74 UJ	77.3 U	62.8 U	83 U	4400 U	79.8 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	63 U	74 UJ	607	62.8 U	83 U	4400 U	79.8 U
Naphthalene	75000	ug/kg	210 U	247 UJ	258 U	209 U	277 U	4400 U	266 U
Pyrene	17000000	ug/kg	63 U	50 J	838	62.8 U	83 U	4400 U	79.8 U
2,4,5-Trichlorophenol	61000000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2,4,6-Trichlorophenol	440000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2,4-Dichlorophenol	1800000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2,4-Dimethylphenol	12000000	ug/kg	1800 U	1800 U	8700 U	3500 U	20000 U	8700 U	2300 U
2,4-Dinitrophenol	1200000	ug/kg	1800 U	1800 U	8700 U	3500 U	20000 U	8700 U	2300 U
2,4-Dinitrotoluene	16000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2,6-Dinitrotoluene	610000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2-Chloronaphthalene	63000000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2-Chlorophenol	3900000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
2-Nitroaniline	6100000	ug/kg	1800 U	1800 U	8700 U	3500 U	20000 U	8700 U	2300 U
3,3'-Dichlorobenzidine	11000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
4-Chloroaniline	24000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
4-Nitroaniline	240000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
Benzoic acid	2400000000	ug/kg	3600 U	3500 U	17000 U	6900 U	39000 U	17000 U	4600 U
Benzyl alcohol	6100000	ug/kg	2000 U	2000 U	9600 U	3800 U	22000 U	9600 U	2500 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
bis(2-chloroethyl)ether	2100	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
Dibenzofuran	780000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
Diethyl phthalate	49000000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
Di-n-butyl phthalate	61000000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
Hexachlorobenzene	3000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U
Hexachlorobutadiene	62000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3	DUT G4	DUT G4	DUT G4	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	
PAH Resample Date		06/24/20	06/17/20	06/17/20	06/17/20	06/24/20	N/A	06/18/20	06/24/20	N/A	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U
Isophorone	5100000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U
Nitrobenzene	48000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U
N-Nitrosodiphenylamine	990000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U
Pentachlorophenol	8900	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U
Phenanthrene	1300	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U
Phenol	180000000	ug/kg	920 U	900 U	4300 U	1700 U	9900 U	4400 U	1200 U	4200 U	10000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT G5	DUT G5	DUT G5	DUT H1	DUT H1	DUT H1	DUT H2	DUT H2	DUT H2
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
PAH Resample Date	N/A	06/23/20	N/A	06/24/20	06/24/20	N/A	06/17/20	06/24/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	180 U	217 U	4300 U	212 U	242 U	4400 U	208 U
Acenaphthene	34000000	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Anthracene	170000000	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Benzo(k)fluoranthene	1300	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Benzo[a]anthracene	1300	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Benzo[a]pyrene	330	ug/kg	180 U	65 U	4300 U	63.6 U	46 J	4400 U	62.5 U
Benzo[b]fluoranthene	1300	ug/kg	180 U	44 J	4300 U	63.6 U	72 J	4400 U	62.5 U
Chrysene	150000	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Dibenz(a,h)anthracene	1100	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Fluoranthene	23000000	ug/kg	180 U	65 U	4300 U	63.6 U	68 J	4400 U	62.5 U
Fluorene	23000000	ug/kg	180 U	65 U	4300 U	63.6 U	72.6 U	4400 U	62.5 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	180 U	59 J	4300 U	63.6 U	85 j	4400 U	62.5 U
Naphthalene	75000	ug/kg	180 U	217 U	4300 UJ	212 U	242 U	4400 U	208 U
Pyrene	17000000	ug/kg	180 U	52 J	4300 U	63.6 U	98 J	4400 U	62.5 U
2,4,5-Trichlorophenol	61000000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 U	4400 U	860 U
2,4,6-Trichlorophenol	440000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 U	4400 U	860 U
2,4-Dichlorophenol	1800000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
2,4-Dimethylphenol	12000000	ug/kg	350 U	7500 U	8600 U	7900 U	21000 U	8700 U	1700 U
2,4-Dinitrophenol	12000000	ug/kg	350 U	7500 U	8600 UJ	7900 U	21000 U	8700 U	1700 U
2,4-Dinitrotoluene	160000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
2,6-Dinitrotoluene	610000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
2-Chloronaphthalene	63000000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
2-Chlorophenol	3900000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
2-Nitroaniline	6100000	ug/kg	350 U	7500 U	8600 U	7900 U	21000 U	8700 U	1700 U
3,3'-Dichlorobenzidine	11000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
4-Chloroaniline	24000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 UJ	4400 U	860 U
4-Nitroaniline	240000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
Benzoic acid	2400000000	ug/kg	700 U	15000 U	17000 U	16000 U	42000 U	17000 U	3400 U
Benzyl alcohol	6100000	ug/kg	390 U	8200 U	9500 UJ	8700 U	23000 UJ	9600 U	1900 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 UJ	4400 U	860 U
bis(2-chloroethyl)ether	2100	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 UJ	4400 U	860 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
Dibenzofuran	780000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
Diethyl phthalate	49000000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
Di-n-butyl phthalate	61000000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
Hexachlorobenzene	3000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U
Hexachlorobutadiene	62000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT G5	DUT G5	DUT G5	DUT H1	DUT H1	DUT H1	DUT H2	DUT H2	DUT H2	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	
PAH Resample Date		N/A	06/23/20	N/A	06/24/20	06/24/20	N/A	06/17/20	06/24/20	N/A	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 UJ	4400 U	860 U	4300 U	10000 U
Isophorone	5100000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 UJ	4400 U	860 U	4300 U	10000 U
Nitrobenzene	48000	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 UJ	4400 U	860 U	4300 U	10000 U
N-Nitrosodiphenylamine	990000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U	4300 U	10000 U
Pentachlorophenol	8900	ug/kg	180 U	3700 U	4300 UJ	4000 U	11000 U	4400 U	860 U	4300 U	10000 U
Phenanthrene	1300	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U	4300 U	10000 U
Phenol	180000000	ug/kg	180 U	3700 U	4300 U	4000 U	11000 U	4400 U	860 U	4300 U	10000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT H3	DUT H3	DUT H3	DUT H4	DUT H4	DUT H4	DUT H5	DUT H5	DUT H5
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
PAH Resample Date	06/18/20	06/18/20	N/A	06/18/20	06/18/20	06/18/20	06/23/20	06/23/20	06/23/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	273 UJ	312 UJ	11000 U	207 U	337 UJ	262 U	206 U
Acenaphthene	34000000	ug/kg	81.8 UJ	93.6 UJ	11000 U	62 U	101 UJ	78.7 U	61.7 U
Anthracene	170000000	ug/kg	81.8 UJ	93.6 UJ	11000 U	62 U	101 UJ	78.7 U	61.7 U
Benzo(k)fluoranthene	1300	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	78.7 U	61.7 U
Benzo[a]anthracene	1300	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	65 J	61.7 U
Benzo[a]pyrene	330	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	190	61.7 U
Benzo[b]fluoranthene	1300	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	202	61.7 U
Chrysene	150000	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	139 J	61.7 U
Dibenz(a,h)anthracene	1100	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	78.7 U	61.7 U
Fluoranthene	23000000	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	215	61.7 U
Fluorene	23000000	ug/kg	81.8 UJ	93.6 UJ	11000 U	62 U	101 UJ	78.7 U	61.7 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	206	61.7 U
Naphthalene	75000	ug/kg	273 UJ	312 UJ	11000 U	207 U	337 UJ	262 U	206 U
Pyrene	17000000	ug/kg	81.8 U	93.6 UJ	11000 U	62 U	101 UJ	291	61.7 U
2,4,5-Trichlorophenol	61000000	ug/kg	2300 U	4100 U	11000 UJ	3700 U	870 U	1900 U	870 U
2,4,6-Trichlorophenol	440000	ug/kg	2300 U	4100 U	11000 UJ	3700 U	870 U	1900 U	870 U
2,4-Dichlorophenol	1800000	ug/kg	2300 U	4100 U	11000 U	3700 U	870 U	1900 U	870 U
2,4-Dimethylphenol	12000000	ug/kg	4500 U	8300 U	22000 U	7300 U	1700 U	3700 U	1700 U
2,4-Dinitrophenol	1200000	ug/kg	4500 U	8300 U	22000 UJ	7300 U	1700 U	3700 U	1700 U
2,4-Dinitrotoluene	16000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
2,6-Dinitrotoluene	610000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
2-Chloronaphthalene	63000000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
2-Chlorophenol	3900000	ug/kg	2300 U	4100 U	11000 U	3700 U	870 U	1900 U	870 U
2-Nitroaniline	6100000	ug/kg	4500 UJ	8300 U	22000 U	7300 U	1700 U	3700 U	1700 U
3,3'-Dichlorobenzidine	11000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
4-Chloroaniline	24000	ug/kg	2300 UJ	4100 UJ	11000 U	3700 U	870 U	1900 U	870 U
4-Nitroaniline	240000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
Benzoic acid	2400000000	ug/kg	9000 U	16000 U	43000 U	15000 U	3400 U	7400 U	3400 U
Benzyl alcohol	6100000	ug/kg	5000 UJ	9100 UJ	24000 U	8100 U	1900 U	4100 U	1900 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	2300 UJ	4100 UJ	11000 U	3700 U	870 U	1900 U	870 U
bis(2-chloroethyl)ether	2100	ug/kg	2300 UJ	4100 UJ	11000 U	3700 U	870 U	1900 U	870 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	2300 U	4100 U	11000 U	3700 U	870 U	1900 U	870 U
Dibenzofuran	780000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
Diethyl phthalate	49000000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
Di-n-butyl phthalate	61000000	ug/kg	2300 U	4100 U	11000 U	3700 U	870 U	1900 U	870 U
Hexachlorobenzene	3000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U
Hexachlorobutadiene	62000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT H3	DUT H3	DUT H3	DUT H4	DUT H4	DUT H4	DUT H5	DUT H5	DUT H5
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
PAH Resample Date		06/18/20	06/18/20	N/A	06/18/20	06/18/20	06/18/20	06/23/20	06/23/20	06/23/20
Chemical	CC	Units								
Hexachloroethane	120000	ug/kg	2300 UJ	4100 UJ	11000 U	3700 U	870 U	1900 U	870 U	1800 U
Isophorone	5100000	ug/kg	2300 UJ	4100 UJ	11000 U	3700 U	870 U	1900 U	870 U	1800 U
Nitrobenzene	48000	ug/kg	2300 UJ	4100 UJ	11000 U	3700 U	870 U	1900 U	870 U	1800 U
N-Nitrosodiphenylamine	990000	ug/kg	2300 UJ	4100 U	11000 U	3700 U	870 U	1900 U	870 U	1800 U
Pentachlorophenol	8900	ug/kg	2300 U	4100 U	11000 UJ	3700 U	870 U	1900 U	870 U	1800 U
Phenanthrene	1300	ug/kg	2300 U	4100 U	11000 U	3700 U	870 U	1900 U	870 U	1800 U
Phenol	180000000	ug/kg	2300 U	4100 U	11000 U	3700 U	870 U	1900 U	870 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT I1	DUT I1	DUT I1	DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
PAH Resample Date	06/16/20	06/24/20	N/A	06/17/20	06/24/20	N/A	06/18/20	06/24/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	211 UJ	234 U	9900 U	209 U	244 UJ	10000 U	208 U
Acenaphthene	34000000	ug/kg	63.2 UJ	70.2 U	9900 U	62.7 U	73.3 UJ	10000 U	62.3 U
Anthracene	170000000	ug/kg	63.2 UJ	70.2 U	9900 U	62.7 U	73.3 UJ	10000 UJ	62.3 U
Benzo(k)fluoranthene	1300	ug/kg	63.2 U	67 J	9900 U	62.7 U	73.3 UJ	10000 UJ	62.3 U
Benzo[a]anthracene	1300	ug/kg	63.2 U	64 J	9900 U	62.7 U	73.3 UJ	10000 UJ	62.3 U
Benzo[a]pyrene	330	ug/kg	63.2 U	175	9900 U	62.7 U	78 J	10000 UJ	62.3 U
Benzo[b]fluoranthene	1300	ug/kg	63.2 U	289	9900 U	62.7 U	108 J	10000 UJ	62.3 U
Chrysene	150000	ug/kg	63.2 U	149	9900 U	62.7 U	73.3 UJ	10000 UJ	62.3 U
Dibenz(a,h)anthracene	1100	ug/kg	63.2 U	70.2 U	9900 U	62.7 U	73.3 UJ	10000 UJ	62.3 U
Fluoranthene	23000000	ug/kg	63.2 U	229	9900 U	62.7 U	98 J	10000 UJ	62.3 U
Fluorene	23000000	ug/kg	63.2 UJ	70.2 U	9900 U	62.7 U	73.3 UJ	10000 U	62.3 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	63.2 U	313	9900 U	62.7 U	119 J	10000 UJ	62.3 U
Naphthalene	75000	ug/kg	211 UJ	234 U	9900 U	209 U	244 UJ	10000 U	208 U
Pyrene	17000000	ug/kg	63.2 U	315	9900 U	62.7 U	138 J	10000 UJ	62.3 U
2,4,5-Trichlorophenol	61000000	ug/kg	870 U	11000 U	9900 U	860 U	9900 UJ	10000 UJ	3700 U
2,4,6-Trichlorophenol	440000	ug/kg	870 U	11000 U	9900 U	860 U	9900 UJ	10000 UJ	3700 U
2,4-Dichlorophenol	1800000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
2,4-Dimethylphenol	12000000	ug/kg	1700 U	21000 U	20000 U	1700 U	20000 U	21000 U	7400 U
2,4-Dinitrophenol	1200000	ug/kg	1700 U	21000 U	20000 U	1700 U	20000 UJ	21000 UJ	7400 U
2,4-Dinitrotoluene	16000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
2,6-Dinitrotoluene	610000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
2-Chloronaphthalene	63000000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
2-Chlorophenol	3900000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
2-Nitroaniline	6100000	ug/kg	1700 U	21000 U	20000 U	1700 U	20000 U	21000 U	7400 U
3,3'-Dichlorobenzidine	11000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
4-Chloroaniline	24000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
4-Nitroaniline	240000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
Benzoic acid	2400000000	ug/kg	3400 U	42000 U	39000 U	3400 U	39000 U	41000 U	15000 U
Benzyl alcohol	6100000	ug/kg	1900 U	23000 U	22000 U	1900 U	22000 U	23000 U	8200 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
bis(2-chloroethyl)ether	2100	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 UJ	3700 U
Dibenzofuran	780000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
Diethyl phthalate	49000000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
Di-n-butyl phthalate	61000000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 UJ	3700 U
Hexachlorobenzene	3000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U
Hexachlorobutadiene	62000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT I1	DUT I1	DUT I1	DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	
PAH Resample Date		06/16/20	06/24/20	N/A	06/17/20	06/24/20	N/A	06/18/20	06/24/20	N/A	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U	10000 U	10000 U
Isophorone	5100000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U	10000 U	10000 U
Nitrobenzene	48000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U	10000 U	10000 U
N-Nitrosodiphenylamine	990000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U	10000 U	10000 U
Pentachlorophenol	8900	ug/kg	870 U	11000 U	9900 U	860 U	9900 UJ	10000 UJ	3700 U	10000 U	10000 U
Phenanthrene	1300	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 UJ	3700 U	10000 U	10000 U
Phenol	180000000	ug/kg	870 U	11000 U	9900 U	860 U	9900 U	10000 U	3700 U	10000 U	10000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT I4	DUT I4	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019
PAH Resample Date	06/24/20	06/24/20	N/A	06/22/20	06/24/20	N/A	06/17/20	06/17/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	227 U	236 U	9800 U	214 U	229 UJ	9600 U	217 U
Acenaphthene	34000000	ug/kg	68.1 U	70.7 U	9800 U	64.2 U	68.7 UJ	9600 U	65.2 U
Anthracene	170000000	ug/kg	68.1 U	70.7 U	9800 U	64.2 U	68.7 UJ	9600 U	65.2 U
Benzo(k)fluoranthene	1300	ug/kg	80 J	70 J	9800 U	64.2 U	50 J	9600 U	65.2 U
Benzo[a]anthracene	1300	ug/kg	81 J	65 J	9800 U	64.2 U	51 J	9600 U	65.2 U
Benzo[a]pyrene	330	ug/kg	237	187	9800 U	64.2 U	151 J	9600 U	65.2 U
Benzo[b]fluoranthene	1300	ug/kg	275	272	9800 U	64.2 U	214 J	9600 U	65.2 U
Chrysene	150000	ug/kg	115 J	119 J	9800 U	64.2 U	85 J	9600 U	65.2 U
Dibenz(a,h)anthracene	1100	ug/kg	68.1 U	70.7 U	9800 U	64.2 U	68.7 UJ	9600 U	65.2 U
Fluoranthene	23000000	ug/kg	263	223	9800 U	64.2 U	163 J	9600 U	65.2 U
Fluorene	23000000	ug/kg	68.1 U	70.7 U	9800 U	64.2 U	68.7 UJ	9600 U	65.2 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	388	324	9800 U	64.2 U	266 J	9600 U	65.2 U
Naphthalene	75000	ug/kg	227 U	236 U	9800 U	214 U	229 UJ	9600 U	217 U
Pyrene	17000000	ug/kg	412	319	9800 U	64.2 U	251	9600 U	65.2 U
2,4,5-Trichlorophenol	61000000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 UJ	1800 U
2,4,6-Trichlorophenol	440000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 UJ	1800 U
2,4-Dichlorophenol	1800000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
2,4-Dimethylphenol	12000000	ug/kg	7000 U	8000 U	20000 U	1800 U	19000 U	19000 U	3600 U
2,4-Dinitrophenol	12000000	ug/kg	7000 U	8000 U	20000 U	1800 U	19000 U	19000 UJ	3600 U
2,4-Dinitrotoluene	160000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
2,6-Dinitrotoluene	610000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
2-Chloronaphthalene	63000000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
2-Chlorophenol	3900000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
2-Nitroaniline	6100000	ug/kg	7000 U	8000 U	20000 U	1800 U	19000 U	19000 U	3600 U
3,3'-Dichlorobenzidine	11000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
4-Chloroaniline	24000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
4-Nitroaniline	240000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
Benzoic acid	2400000000	ug/kg	14000 U	16000 U	39000 U	3600 U	38000 U	38000 U	7200 U
Benzyl alcohol	6100000	ug/kg	7700 U	8800 U	22000 U	2000 U	21000 U	21000 U	4000 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
bis(2-chloroethyl)ether	2100	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
Dibenzofuran	780000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
Diethyl phthalate	49000000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
Di-n-butyl phthalate	61000000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
Hexachlorobenzene	3000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U
Hexachlorobutadiene	62000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT I4	DUT I4	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019
PAH Resample Date		06/24/20	06/24/20	N/A	06/22/20	06/24/20	N/A	06/17/20	06/17/20	N/A
Chemical	CC	Units								
Hexachloroethane	120000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U	1800 U
Isophorone	5100000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U	1800 U
Nitrobenzene	48000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U	1800 U
N-Nitrosodiphenylamine	990000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U	1800 U
Pentachlorophenol	8900	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 UJ	1800 U	1800 U
Phenanthrene	1300	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U	1800 U
Phenol	18000000	ug/kg	3500 U	4000 U	9800 U	910 U	9500 U	9600 U	1800 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT J2	DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4		
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15		
Sample Date	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019		
PAH Resample Date	06/17/20	06/17/20	N/A	06/18/20	06/18/20	N/A	06/18/20	06/18/20	06/18/20		
Chemical	CC	Units									
2-Methylnaphthalene	2300000	ug/kg	213 U	261 U	10000 U	276 U	262 UJ	10000 U	206 U	250 UJ	279 UJ
Acenaphthene	34000000	ug/kg	63.9 U	78.2 U	10000 U	82.7 U	78.7 UJ	10000 U	61.8 U	75.1 UJ	83.7 UJ
Anthracene	170000000	ug/kg	63.9 U	78.2 U	10000 U	82.7 U	78.7 UJ	10000 U	61.8 U	75.1 UJ	83.7 UJ
Benzo(k)fluoranthene	1300	ug/kg	63.9 U	78.2 U	10000 U	82.7 U	57 J	10000 U	61.8 U	75.1 U	83.7 U
Benzo[a]anthracene	1300	ug/kg	63.9 U	78.2 U	10000 U	82.7 U	66 J	10000 U	61.8 U	75.1 U	49 J
Benzo[a]pyrene	330	ug/kg	63.9 U	120 J	10000 U	82.7 U	252	10000 U	61.8 U	106 J	139 J
Benzo[b]fluoranthene	1300	ug/kg	63.9 U	127 J	10000 U	82.7 U	274	10000 U	61.8 U	133 J	133 J
Chrysene	150000	ug/kg	63.9 U	72 J	10000 U	82.7 U	190	10000 U	61.8 U	93 J	106 J
Dibenz(a,h)anthracene	1100	ug/kg	63.9 U	78.2 U	10000 U	82.7 U	78.7 U	10000 U	61.8 U	75.1 U	83.7 U
Fluoranthene	23000000	ug/kg	63.9 U	155 J	10000 U	82.7 U	257	10000 U	61.8 U	110 J	181
Fluorene	23000000	ug/kg	63.9 U	78.2 U	10000 U	82.7 U	78.7 UJ	10000 U	61.8 U	75.1 UJ	83.7 UJ
Indeno[1,2,3-cd]pyrene	1300	ug/kg	63.9 U	133 J	10000 U	82.7 U	252	10000 U	61.8 U	117 J	125 J
Naphthalene	75000	ug/kg	213 U	261 U	10000 U	276 U	262 UJ	10000 U	206 U	250 UJ	279 UJ
Pyrene	17000000	ug/kg	63.9 U	197	10000 U	82.7 U	327	10000 U	61.8 U	124 J	250
2,4,5-Trichlorophenol	61000000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2,4,6-Trichlorophenol	440000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2,4-Dichlorophenol	1800000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2,4-Dimethylphenol	12000000	ug/kg	1800 U	7100 U	20000 U	3600 U	3500 U	20000 U	7400 U	3900 U	3600 U
2,4-Dinitrophenol	12000000	ug/kg	1800 U	7100 U	20000 U	3600 U	3500 U	20000 U	7400 U	3900 U	3600 U
2,4-Dinitrotoluene	160000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2,6-Dinitrotoluene	610000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2-Chloronaphthalene	63000000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2-Chlorophenol	3900000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
2-Nitroaniline	6100000	ug/kg	1800 U	7100 U	20000 U	3600 U	3500 U	20000 U	7400 U	3900 U	3600 U
3,3'-Dichlorobenzidine	11000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
4-Chloroaniline	24000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
4-Nitroaniline	240000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Benzoic acid	2400000000	ug/kg	3500 U	14000 U	40000 U	7100 U	6900 U	40000 U	15000 U	7700 U	7100 U
Benzyl alcohol	6100000	ug/kg	2000 U	7800 U	22000 U	3900 U	3900 U	22000 U	8200 U	4300 U	4000 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
bis(2-chloroethyl)ether	2100	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Dibenzofuran	780000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Diethyl phthalate	49000000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Di-n-butyl phthalate	61000000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Hexachlorobenzene	3000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Hexachlorobutadiene	62000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT J2	DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019	
PAH Resample Date		06/17/20	06/17/20	N/A	06/18/20	06/18/20	N/A	06/18/20	06/18/20	06/18/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Isophorone	5100000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Nitrobenzene	48000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
N-Nitrosodiphenylamine	990000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Pentachlorophenol	8900	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Phenanthrene	1300	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U
Phenol	180000000	ug/kg	890 U	3600 U	10000 U	1800 U	1800 U	10000 U	3700 U	1900 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2	DUT K2
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019
PAH Resample Date	06/22/20	06/24/20	N/A	06/17/20	06/17/20	N/A	06/17/20	06/17/20	06/17/20
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	209 U	215 U	1800 U	213 U	239 U	4100 U	207 U
Acenaphthene	34000000	ug/kg	62.8 U	64.5 U	1800 U	64 U	71.8 U	4100 U	62.1 U
Anthracene	170000000	ug/kg	62.8 U	64.5 U	1800 U	64 U	71.8 U	4100 U	62.1 U
Benzo(k)fluoranthene	1300	ug/kg	62.8 U	63 J	1800 U	64 U	71.8 U	4100 U	62.1 U
Benzo[a]anthracene	1300	ug/kg	62.8 U	66 J	1800 U	64 U	73 J	4100 U	62.1 U
Benzo[a]pyrene	330	ug/kg	62.8 U	197	1800 U	64 U	212	4100 U	62.1 U
Benzo[b]fluoranthene	1300	ug/kg	62.8 U	289	1800 U	64 U	211	4100 U	62.1 U
Chrysene	150000	ug/kg	62.8 U	131	1800 U	64 U	93 J	4100 U	62.1 U
Dibenz(a,h)anthracene	1100	ug/kg	62.8 U	64.5 U	1800 U	64 U	71.8 U	4100 U	62.1 U
Fluoranthene	23000000	ug/kg	62.8 U	210	1800 U	64 U	235	4100 U	62.1 U
Fluorene	23000000	ug/kg	62.8 U	64.5 U	1800 U	64 U	71.8 U	4100 U	62.1 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	62.8 U	359	1800 U	64 U	223	4100 U	62.1 U
Naphthalene	75000	ug/kg	209 U	215 U	1800 U	213 U	239 U	4100 U	207 U
Pyrene	17000000	ug/kg	62.8 U	342	1800 U	64 U	341	4100 U	62.1 U
2,4,5-Trichlorophenol	61000000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2,4,6-Trichlorophenol	440000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2,4-Dichlorophenol	1800000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2,4-Dimethylphenol	12000000	ug/kg	1800 U	7400 U	3700 U	1900 U	4000 U	8100 U	1700 U
2,4-Dinitrophenol	12000000	ug/kg	1800 U	7400 U	3700 U	1900 U	4000 U	8100 U	1700 U
2,4-Dinitrotoluene	160000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2,6-Dinitrotoluene	610000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2-Chloronaphthalene	63000000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2-Chlorophenol	3900000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
2-Nitroaniline	6100000	ug/kg	1800 U	7400 U	3700 U	1900 U	4000 U	8100 U	1700 U
3,3'-Dichlorobenzidine	11000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
4-Chloroaniline	24000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
4-Nitroaniline	240000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
Benzoic acid	2400000000	ug/kg	3600 U	15000 U	7300 U	3700 U	8000 U	16000 U	3400 U
Benzyl alcohol	6100000	ug/kg	2000 U	8200 U	4000 U	2000 U	4400 U	9000 U	1900 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
bis(2-chloroethyl)ether	2100	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
Dibenzofuran	780000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
Diethyl phthalate	49000000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
Di-n-butyl phthalate	61000000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
Hexachlorobenzene	3000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U
Hexachlorobutadiene	62000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2	DUT K2	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Sample Date		7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	
PAH Resample Date		06/22/20	06/24/20	N/A	06/17/20	06/17/20	N/A	06/17/20	06/17/20	06/17/20	
Chemical	CC	Units									
Hexachloroethane	120000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U
Isophorone	5100000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U
Nitrobenzene	48000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U
N-Nitrosodiphenylamine	990000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U
Pentachlorophenol	8900	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U
Phenanthrene	1300	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U
Phenol	18000000	ug/kg	920 U	3700 U	1800 U	930 U	2000 U	4100 U	870 U	4200 U	4000 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5	DUT K5	DUT K5
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/30/2019	7/30/2019	7/30/2019
PAH Resample Date	06/18/20	06/24/20	06/18/20	06/18/20	06/18/20	N/A	N/A	06/24/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	237 UJ	244 UJ	328 U	208 UJ	233 UJ	4000 U	170 U
Acenaphthene	34000000	ug/kg	71.2 UJ	73.1 UJ	98.5 U	62.4 UJ	69.8 UJ	4000 U	170 U
Anthracene	170000000	ug/kg	71.2 UJ	73.1 UJ	98.5 U	62.4 UJ	69.8 UJ	4000 U	170 U
Benzo(k)fluoranthene	1300	ug/kg	71.2 U	183 J	98.5 U	62.4 U	69.8 UJ	4000 U	170 U
Benzo[a]anthracene	1300	ug/kg	84 J	145 J	98.5 U	62.4 U	69.8 UJ	4000 U	170 U
Benzo[a]pyrene	330	ug/kg	307	471 J	61 J	62.4 U	86 J	4000 U	170 U
Benzo[b]fluoranthene	1300	ug/kg	292	745 J	98.5 U	62.4 U	95 J	4000 U	170 U
Chrysene	150000	ug/kg	197	272 J	98.5 U	62.4 U	68 J	4000 U	170 U
Dibenz(a,h)anthracene	1100	ug/kg	71.2 U	47 J	98.5 U	62.4 U	69.8 UJ	4000 U	170 U
Fluoranthene	23000000	ug/kg	376	496 J	98.5 U	62.4 U	74 J	4000 U	170 U
Fluorene	23000000	ug/kg	71.2 UJ	73.1 UJ	98.5 U	62.4 UJ	69.8 UJ	4000 U	170 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	296	873 J	98.5 U	62.4 U	88 J	4000 U	170 U
Naphthalene	75000	ug/kg	237 UJ	244 UJ	328 U	208 UJ	233 UJ	4000 U	170 U
Pyrene	17000000	ug/kg	414	801 J	98.5 U	62.4 U	103 J	4000 U	170 U
2,4,5-Trichlorophenol	61000000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2,4,6-Trichlorophenol	440000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2,4-Dichlorophenol	1800000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2,4-Dimethylphenol	12000000	ug/kg	1700 U	8000 U	3700 U	1700 U	4300 U	8000 U	340 U
2,4-Dinitrophenol	12000000	ug/kg	1700 U	8000 U	3700 U	1700 U	4300 U	8000 U	340 U
2,4-Dinitrotoluene	160000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2,6-Dinitrotoluene	610000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2-Chloronaphthalene	63000000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2-Chlorophenol	3900000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
2-Nitroaniline	6100000	ug/kg	1700 U	8000 U	3700 U	1700 U	4300 U	8000 U	340 U
3,3'-Dichlorobenzidine	11000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
4-Chloroaniline	24000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
4-Nitroaniline	240000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Benzoic acid	2400000000	ug/kg	3400 U	16000 U	7400 U	3500 U	8500 U	16000 U	680 U
Benzyl alcohol	6100000	ug/kg	1900 U	8800 U	4100 U	1900 U	4700 U	8900 U	380 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
bis(2-chloroethyl)ether	2100	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Dibenzofuran	780000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Diethyl phthalate	49000000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Di-n-butyl phthalate	61000000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Hexachlorobenzene	3000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Hexachlorobutadiene	62000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5	DUT K5	DUT K5
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/30/2019	7/30/2019	7/30/2019
PAH Resample Date	06/18/20	06/24/20	06/18/20	06/18/20	06/18/20	N/A	N/A	06/24/20	N/A
Chemical	CC	Units							
Hexachloroethane	120000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Isophorone	5100000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Nitrobenzene	48000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
N-Nitrosodiphenylamine	990000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Pentachlorophenol	8900	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Phenanthrene	1300	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
Phenol	180000000	ug/kg	860 U	4000 U	1900 U	880 U	2100 U	4000 U	170 U
									9300 U
									3900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2	DUT L3	DUT L3	DUT L3
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019
PAH Resample Date	06/17/20	06/17/20	N/A	06/17/20	06/17/20	N/A	06/18/20	06/24/20	N/A
Chemical	CC	Units							
2-Methylnaphthalene	2300000	ug/kg	279 U	228 U	11000 U	215 U	215 U	3800 U	285 U
Acenaphthene	34000000	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Anthracene	170000000	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Benzo(k)fluoranthene	1300	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Benzo[a]anthracene	1300	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Benzo[a]pyrene	330	ug/kg	126 J	99 J	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Benzo[b]fluoranthene	1300	ug/kg	127 J	99 J	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Chrysene	150000	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Dibenz(a,h)anthracene	1100	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Fluoranthene	23000000	ug/kg	145 J	112 J	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Fluorene	23000000	ug/kg	83.6 U	68.3 U	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	130 J	107 J	11000 U	64.5 U	64.5 U	3800 U	85.6 U
Naphthalene	75000	ug/kg	279 U	228 U	11000 U	215 U	215 U	3800 U	285 U
Pyrene	17000000	ug/kg	209	157	11000 U	64.5 U	64.5 U	3800 U	85.6 U
2,4,5-Trichlorophenol	61000000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2,4,6-Trichlorophenol	440000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2,4-Dichlorophenol	1800000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2,4-Dimethylphenol	12000000	ug/kg	1900 U	7200 U	22000 U	1800 U	8300 U	7700 U	3800 U
2,4-Dinitrophenol	12000000	ug/kg	1900 U	7200 U	22000 U	1800 U	8300 U	7700 U	3800 U
2,4-Dinitrotoluene	160000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2,6-Dinitrotoluene	610000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2-Chloronaphthalene	63000000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2-Chlorophenol	3900000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
2-Nitroaniline	6100000	ug/kg	1900 U	7200 U	22000 U	1800 U	8300 U	7700 U	3800 U
3,3'-Dichlorobenzidine	11000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
4-Chloroaniline	24000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
4-Nitroaniline	240000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
Benzoic acid	2400000000	ug/kg	3700 U	14000 U	43000 U	3600 U	16000 U	15000 U	7600 U
Benzyl alcohol	6100000	ug/kg	2100 U	7900 U	24000 U	2000 U	9100 U	8400 U	4200 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
bis(2-chloroethyl)ether	2100	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
Dibenzofuran	780000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
Diethyl phthalate	49000000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
Di-n-butyl phthalate	61000000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
Hexachlorobenzene	3000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U
Hexachlorobutadiene	62000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id		DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2	DUT L3	DUT L3	DUT L3
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date		7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019
PAH Resample Date		06/17/20	06/17/20	N/A	06/17/20	06/17/20	N/A	06/18/20	06/24/20	N/A
Chemical	CC	Units								
Hexachloroethane	120000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U
Isophorone	5100000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U
Nitrobenzene	48000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U
N-Nitrosodiphenylamine	990000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U
Pentachlorophenol	8900	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U
Phenanthrene	1300	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U
Phenol	180000000	ug/kg	940 U	3600 U	11000 U	910 U	4200 U	3800 U	1900 U	4300 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT L4	DUT L4	DUT L4	DUT L5	DUT L5	DUT L5
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/30/2019	7/30/2019	7/30/2019	7/31/2019	7/31/2019	7/31/2019
PAH Resample Date	06/18/20	06/18/20	N/A	N/A	06/22/20	N/A
Chemical	CC	Units				
2-Methylnaphthalene	2300000	ug/kg	289 U	310 UJ	4000 U	1800 U
Acenaphthene	34000000	ug/kg	86.8 U	93.1 UJ	4000 U	1800 U
Anthracene	170000000	ug/kg	86.8 U	93.1 UJ	4000 U	1800 U
Benzo(k)fluoranthene	1300	ug/kg	86.8 U	93.1 U	4000 U	1800 U
Benzo[a]anthracene	1300	ug/kg	86.8 U	93.1 U	4000 U	1800 U
Benzo[a]pyrene	330	ug/kg	86.8 U	121 J	4000 U	1800 U
Benzo[b]fluoranthene	1300	ug/kg	86.8 U	124 J	4000 U	1800 U
Chrysene	150000	ug/kg	86.8 U	88 J	4000 U	1800 U
Dibenz(a,h)anthracene	1100	ug/kg	86.8 U	93.1 U	4000 U	1800 U
Fluoranthene	23000000	ug/kg	86.8 U	102 J	4000 U	1800 U
Fluorene	23000000	ug/kg	86.8 U	93.1 UJ	4000 U	1800 U
Indeno[1,2,3-cd]pyrene	1300	ug/kg	86.8 U	122 J	4000 U	1800 U
Naphthalene	75000	ug/kg	289 U	310 UJ	4000 U	1800 U
Pyrene	17000000	ug/kg	86.8 U	155 J	4000 U	1800 U
2,4,5-Trichlorophenol	61000000	ug/kg	920 U	900 U	4000 U	1800 U
2,4,6-Trichlorophenol	440000	ug/kg	920 U	900 U	4000 U	1800 U
2,4-Dichlorophenol	1800000	ug/kg	920 U	900 U	4000 U	1800 U
2,4-Dimethylphenol	12000000	ug/kg	1800 U	1800 U	8000 U	3700 U
2,4-Dinitrophenol	1200000	ug/kg	1800 U	1800 U	8000 U	3700 U
2,4-Dinitrotoluene	16000	ug/kg	920 U	900 U	4000 U	1800 U
2,6-Dinitrotoluene	610000	ug/kg	920 U	900 U	4000 U	1800 U
2-Chloronaphthalene	63000000	ug/kg	920 U	900 U	4000 U	1800 U
2-Chlorophenol	3900000	ug/kg	920 U	900 U	4000 U	1800 U
2-Nitroaniline	6100000	ug/kg	1800 U	1800 U	8000 U	3700 U
3,3'-Dichlorobenzidine	11000	ug/kg	920 U	900 U	4000 U	1800 U
4-Chloroaniline	24000	ug/kg	920 U	900 U	4000 U	1800 U
4-Nitroaniline	240000	ug/kg	920 U	900 U	4000 U	1800 U
Benzoic acid	2400000000	ug/kg	3600 U	3600 U	16000 U	7300 U
Benzyl alcohol	6100000	ug/kg	2000 U	2000 U	8800 U	4000 U
bis(2-Chloroethoxy)methane	1800000	ug/kg	920 U	900 U	4000 U	1800 U
bis(2-chloroethyl)ether	2100	ug/kg	920 U	900 U	4000 U	1800 U
bis(2-Ethylhexyl) phthalate	350000	ug/kg	920 U	900 U	4000 U	1800 U
Dibenzofuran	780000	ug/kg	920 U	900 U	4000 U	1800 U
Diethyl phthalate	49000000	ug/kg	920 U	900 U	4000 U	1800 U
Di-n-butyl phthalate	61000000	ug/kg	920 U	900 U	4000 U	1800 U
Hexachlorobenzene	3000	ug/kg	920 U	900 U	4000 U	1800 U
Hexachlorobutadiene	62000	ug/kg	920 U	900 U	4000 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 3
DUTRA SVOC RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location Id	DUT L4	DUT L4	DUT L4	DUT L5	DUT L5	DUT L5
Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15
Sample Date	7/30/2019	7/30/2019	7/30/2019	7/31/2019	7/31/2019	7/31/2019
PAH Resample Date	06/18/20	06/18/20	N/A	N/A	06/22/20	N/A
Chemical	CC	Units				
Hexachloroethane	120000	ug/kg	920 U	900 U	4000 U	1800 U
Isophorone	5100000	ug/kg	920 U	900 U	4000 U	1800 U
Nitrobenzene	48000	ug/kg	920 U	900 U	4000 U	1800 U
N-Nitrosodiphenylamine	990000	ug/kg	920 U	900 U	4000 U	1800 U
Pentachlorophenol	8900	ug/kg	920 U	900 U	4000 U	1800 U
Phenanthrene	1300	ug/kg	920 U	900 U	4000 U	1800 U
Phenol	18000000	ug/kg	920 U	900 U	4000 U	1800 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

Bold - LOD exceeds HPNS CC

µg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3	DUT A3
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 U	12 U	12 U	11 U	11 UJ	11 UJ	12 U	12 U
Arochlor 1221	140	ug/kg	14 U	15 U	16 U	14 U	14 UJ	14 UJ	15 U	15 U
Arochlor 1232	140	ug/kg	6.3 U	7 U	7.5 U	6.5 U	6.6 UJ	6.5 UJ	7 U	7 U
Arochlor 1242	740	ug/kg	5.2 U	5.8 U	6.2 U	5.4 U	5.5 UJ	5.4 UJ	5.9 U	5.8 U
Arochlor 1248	740	ug/kg	8.4 U	9.3 U	10 U	8.7 U	8.8 UJ	8.7 UJ	9.4 U	9.3 U
Arochlor 1254	740	ug/kg	14 U	15 U	16 U	14 U	14 UJ	14 UJ	15 U	15 U
Arochlor 1260	740	ug/kg	10 UJ	12 UJ	12 UJ	11 UJ	11 UJ	11 UJ	12 UJ	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2	DUT B2	DUT B2
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 UJ	12 U	13 U	11 U	12 U	13 U	11 U	11 UJ
Arochlor 1221	140	ug/kg	14 UJ	15 U	17 U	14 U	16 U	17 U	14 U	14 UJ
Arochlor 1232	140	ug/kg	6.2 UJ	7.1 U	7.7 U	6.5 U	7.2 U	7.7 U	6.4 U	6.6 UJ
Arochlor 1242	740	ug/kg	5.2 UJ	5.1 J	33 J	5.5 U	19 J	6.4 U	5.4 U	5.5 UJ
Arochlor 1248	740	ug/kg	8.3 UJ	9.4 U	10 U	8.7 U	9.6 U	10 U	8.6 U	8.8 UJ
Arochlor 1254	740	ug/kg	14 UJ	15 U	17 U	14 U	16 U	17 U	14 U	14 UJ
Arochlor 1260	740	ug/kg	10 UJ	12 U	13 U	11 U	12 U	13 U	11 U	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4	DUT B5	DUT B5	DUT B5
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	11 UJ	10 UJ	11 UJ	9.9 UJ	11 UJ	12 UJ	10 UJ	11 UJ
Arochlor 1221	140	ug/kg	14 UJ	13 UJ	14 UJ	13 UJ	14 UJ	16 UJ	13 UJ	14 UJ
Arochlor 1232	140	ug/kg	6.4 UJ	6.1 UJ	6.6 UJ	5.9 UJ	6.4 UJ	7.2 UJ	6.2 UJ	6.3 UJ
Arochlor 1242	740	ug/kg	5.3 UJ	5.1 UJ	5.5 UJ	5 UJ	5.3 UJ	6 UJ	5.1 UJ	5.3 UJ
Arochlor 1248	740	ug/kg	8.5 UJ	8.2 UJ	8.8 UJ	7.9 UJ	8.5 UJ	9.6 UJ	8.2 UJ	8.5 UJ
Arochlor 1254	740	ug/kg	14 UJ	13 UJ	14 UJ	13 UJ	14 UJ	16 UJ	13 UJ	14 UJ
Arochlor 1260	740	ug/kg	11 UJ	10 UJ	11 UJ	9.9 UJ	11 UJ	12 UJ	10 UJ	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT C1	DUT C1	DUT C1	DUT C2	DUT C2	DUT C2	DUT C3	DUT C3	DUT C3
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/19/2019	7/19/2019	7/19/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 UJ	11 UJ	12 UJ	11 UJ	11 UJ	11 U	11 U	11 U
Arochlor 1221	140	ug/kg	14 UJ	14 UJ	16 UJ	14 UJ	15 UJ	14 UJ	14 U	14 U
Arochlor 1232	140	ug/kg	6.3 UJ	6.4 UJ	7.4 UJ	6.6 UJ	6.7 UJ	6.6 UJ	6.3 U	6.4 U
Arochlor 1242	740	ug/kg	5.2 UJ	5.3 UJ	6.2 UJ	5.5 UJ	5.6 UJ	5.5 UJ	5.3 U	5.6 U
Arochlor 1248	740	ug/kg	8.4 UJ	8.6 UJ	9.8 UJ	8.8 UJ	9 UJ	8.7 UJ	8.4 U	8.5 U
Arochlor 1254	740	ug/kg	14 UJ	14 UJ	16 UJ	14 UJ	15 UJ	14 UJ	14 U	14 U
Arochlor 1260	740	ug/kg	10 UJ	11 UJ	12 UJ	11 UJ	11 UJ	11 U	11 U	11 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT C4	DUT C4	DUT C4	DUT C5	DUT C5	DUT C5	DUT D1	DUT D1	DUT D1	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Date		7/19/2019									
Chemical	CC	Units									
Arochlor 1016	7400	ug/kg	11 U	12 U	11 U	10 U	12 U	11 U	11 U	10 U	11 U
Arochlor 1221	140	ug/kg	15 U	15 U	15 U	13 U	15 U	14 U	14 U	13 U	15 U
Arochlor 1232	140	ug/kg	6.8 U	7 U	6.9 U	6.1 U	7 U	6.6 U	6.4 U	6.2 U	6.7 U
Arochlor 1242	740	ug/kg	5.7 U	5.9 U	5.7 U	5 U	5.8 U	5.5 U	5.3 U	5.2 U	5.6 U
Arochlor 1248	740	ug/kg	9.1 U	9.4 U	9.1 U	8.1 U	9.3 U	8.8 U	8.5 U	8.3 U	9 U
Arochlor 1254	740	ug/kg	15 U	15 U	15 U	13 U	15 U	14 U	14 U	13 U	15 U
Arochlor 1260	740	ug/kg	11 U	12 U	11 U	10 U	12 U	11 U	11 U	10 U	11 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT D2	DUT D2	DUT D2	DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D4
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/22/2019	7/22/2019	7/22/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	9.9 U	11 U	13 U	10 U	11 U	12 U	11 U	11 UJ
Arochlor 1221	140	ug/kg	13 U	14 U	16 U	13 U	14 U	15 U	14 U	15 UJ
Arochlor 1232	140	ug/kg	5.9 U	6.3 U	7.5 U	6.1 U	6.4 U	7.1 U	6.3 U	6.9 UJ
Arochlor 1242	740	ug/kg	5 U	5.3 U	6.3 U	5.1 U	5.3 U	5.9 U	5.3 U	5.7 UJ
Arochlor 1248	740	ug/kg	7.9 U	8.5 U	10 U	8.1 U	8.5 U	9.5 U	8.4 U	9.2 UJ
Arochlor 1254	740	ug/kg	13 U	14 U	16 U	13 U	14 U	15 U	14 U	15 UJ
Arochlor 1260	740	ug/kg	9.9 U	11 U	13 U	10 U	11 U	12 U	11 U	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT D5	DUT D5	DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Date		7/22/2019	7/22/2019	7/22/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	
Chemical	CC	Units									
Arochlor 1016	7400	ug/kg	10 UJ	11 U	11 U	10 U	12 UJ	13 UJ	11 U	12 U	11 U
Arochlor 1221	140	ug/kg	14 UJ	14 U	14 U	13 U	16 UJ	16 UJ	15 U	15 U	14 U
Arochlor 1232	140	ug/kg	6.3 UJ	6.5 U	6.5 U	6.1 U	7.2 UJ	7.6 UJ	6.7 U	6.9 U	6.5 U
Arochlor 1242	740	ug/kg	5.2 UJ	5.4 U	5.4 U	5.1 U	6 UJ	6.3 UJ	5.6 U	5.8 U	5.4 U
Arochlor 1248	740	ug/kg	8.4 UJ	8.6 U	8.6 U	8.1 U	9.7 UJ	10 UJ	9 U	9.3 U	8.7 U
Arochlor 1254	740	ug/kg	14 UJ	14 U	14 U	13 U	16 UJ	16 UJ	31 U	15 U	14 U
Arochlor 1260	740	ug/kg	10 UJ	11 U	11 U	10 UJ	12 UJ	13 UJ	11 UJ	12 UJ	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT E3	DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/23/2019	7/23/2019	7/23/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 U	12 UJ	11 UJ	12 U	12 U	11 UJ	11 U	11 U
Arochlor 1221	140	ug/kg	14 U	15 UJ	15 UJ	16 U	15 U	14 UJ	14 U	15 U
Arochlor 1232	140	ug/kg	6.2 U	6.9 UJ	6.9 UJ	7.2 U	7 U	6.6 UJ	6.4 U	6.8 U
Arochlor 1242	740	ug/kg	5.2 U	5.8 UJ	5.7 UJ	6 U	5.8 U	5.5 UJ	5.3 U	5.7 U
Arochlor 1248	740	ug/kg	8.3 U	9.3 UJ	9.2 UJ	9.6 U	9.3 U	8.8 UJ	8.5 U	9 U
Arochlor 1254	740	ug/kg	14 U	15 UJ	15 UJ	16 U	15 U	14 UJ	14 U	15 U
Arochlor 1260	740	ug/kg	10 U	12 UJ	11 UJ	12 U	12 U	11 UJ	11 U	11 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3	DUT F3
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	11 U	11 U	11 U	10 U	11 U	57 U	11 U	11 U
Arochlor 1221	140	ug/kg	14 U	14 U	14 U	13 U	15 U	74 U	14 U	15 U
Arochlor 1232	140	ug/kg	6.3 U	6.5 U	6.4 U	6.2 U	6.8 U	34 U	6.3 U	6.9 U
Arochlor 1242	740	ug/kg	5.3 U	5.4 U	5.4 U	5.2 U	5.7 U	28 U	5.3 U	5.7 U
Arochlor 1248	740	ug/kg	8.4 U	8.6 U	8.6 U	8.2 U	9.1 U	45 U	8.5 U	9.2 U
Arochlor 1254	740	ug/kg	14 U	14 U	14 U	13 U	15 U	74 U	14 U	15 U
Arochlor 1260	740	ug/kg	11 U	11 U	11 U	10 U	11 U	57 U	11 U	11 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT F5	DUT G1	DUT G1	DUT G1
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 U	10 U	11 U	10 U	10 U	11 U	11 U	12 U
Arochlor 1221	140	ug/kg	14 U	13 U	14 U	13 U	13 U	14 U	14 U	15 U
Arochlor 1232	140	ug/kg	6.3 U	6 U	6.5 U	6 U	6.2 U	6.4 U	6.5 U	6.9 U
Arochlor 1242	740	ug/kg	5.2 U	5 U	5.4 U	5 U	5.2 U	5.4 U	5.4 U	5.8 U
Arochlor 1248	740	ug/kg	8.4 U	8 U	8.6 U	8 U	8.3 U	8.6 U	8.7 U	9.3 U
Arochlor 1254	740	ug/kg	14 U	13 U	14 U	13 U	13 U	14 U	14 U	15 U
Arochlor 1260	740	ug/kg	10 U	10 U	11 U	10 U	10 U	11 U	11 U	12 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3	DUT G4	DUT G4	DUT G4
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 UJ	10 UJ	13 UJ	10 UJ	12 UJ	13 UJ	13 UJ	12 UJ
Arochlor 1221	140	ug/kg	14 UJ	13 UJ	16 UJ	13 UJ	16 UJ	17 UJ	17 UJ	16 UJ
Arochlor 1232	140	ug/kg	6.3 UJ	6.1 UJ	7.5 UJ	6.1 UJ	7.2 UJ	7.7 UJ	7.9 UJ	7.4 UJ
Arochlor 1242	740	ug/kg	5.2 UJ	5.1 UJ	6.3 UJ	5.1 UJ	6 UJ	6.4 UJ	6.6 UJ	6.2 UJ
Arochlor 1248	740	ug/kg	8.4 UJ	8.1 UJ	10 UJ	8.2 UJ	9.6 UJ	10 UJ	11 UJ	9.9 UJ
Arochlor 1254	740	ug/kg	14 UJ	13 UJ	16 UJ	13 UJ	16 UJ	17 UJ	17 UJ	16 UJ
Arochlor 1260	740	ug/kg	10 UJ	10 UJ	13 UJ	10 UJ	12 UJ	13 UJ	13 UJ	12 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT G5	DUT G5	DUT G5	DUT H1	DUT H1	DUT H1	DUT H2	DUT H2	DUT H2
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 UJ	11 UJ	12 UJ	11 UJ	12 UJ	13 UJ	10 UJ	12 UJ
Arochlor 1221	140	ug/kg	13 UJ	14 UJ	16 UJ	15 UJ	16 UJ	17 UJ	13 UJ	16 UJ
Arochlor 1232	140	ug/kg	6 UJ	6.6 UJ	7.5 UJ	6.9 UJ	7.4 UJ	7.8 UJ	6 UJ	7.2 UJ
Arochlor 1242	740	ug/kg	5 UJ	5.5 UJ	6.2 UJ	5.7 UJ	6.1 UJ	6.5 UJ	5 UJ	6 UJ
Arochlor 1248	740	ug/kg	8.1 UJ	8.9 UJ	9.9 UJ	9.2 UJ	9.8 UJ	10 UJ	8 UJ	9.6 UJ
Arochlor 1254	740	ug/kg	13 UJ	14 UJ	16 UJ	15 UJ	16 UJ	17 UJ	13 UJ	16 UJ
Arochlor 1260	740	ug/kg	10 UJ	11 UJ	12 UJ	11 UJ	12 UJ	13 UJ	10 UJ	12 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT H3	DUT H3	DUT H3	DUT H4	DUT H4	DUT H4	DUT H5	DUT H5	DUT H5
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	14 U	12 U	13 U	11 U	10 U	11 U	10 U	11 U
Arochlor 1221	140	ug/kg	18 U	15 U	16 U	15 U	14 U	14 U	13 U	14 U
Arochlor 1232	140	ug/kg	8.3 U	7.1 U	7.5 U	6.7 U	6.2 U	6.4 U	6 U	6.3 U
Arochlor 1242	740	ug/kg	6.9 U	5.9 U	6.3 U	5.6 U	5.2 U	5.3 U	5 U	5.3 U
Arochlor 1248	740	ug/kg	11 U	9.4 U	10 U	9 U	8.3 U	8.5 U	8 U	8.5 U
Arochlor 1254	740	ug/kg	18 U	15 U	16 U	15 U	14 U	14 U	13 U	14 U
Arochlor 1260	740	ug/kg	14 U	12 U	13 U	11 U	10 U	11 U	10 U	11 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT I1	DUT I1	DUT I1	DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Date		7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	
Chemical	CC	Units									
Arochlor 1016	7400	ug/kg	10 U	12 U	12 U	10 U	11 U	12 U	11 UJ	12 U	12 UJ
Arochlor 1221	140	ug/kg	13 U	16 U	15 U	13 U	15 U	15 U	14 UJ	15 U	16 UJ
Arochlor 1232	140	ug/kg	6.1 U	7.4 U	6.9 U	6.2 U	6.8 U	7.1 U	6.5 UJ	7 U	7.3 UJ
Arochlor 1242	740	ug/kg	5.1 U	6.2 U	5.8 U	5.1 U	5.7 U	5.9 U	5.4 UJ	5.9 U	6.1 UJ
Arochlor 1248	740	ug/kg	8.1 U	9.8 U	9.2 U	8.2 U	9.1 U	9.4 U	8.7 UJ	9.4 U	9.7 UJ
Arochlor 1254	740	ug/kg	13 U	16 U	15 U	13 U	15 U	15 U	14 UJ	15 U	16 UJ
Arochlor 1260	740	ug/kg	10 U	12 U	12 U	10 U	11 U	12 U	11 UJ	12 U	12 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT I4	DUT I4	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	
Chemical	CC	Units									
Arochlor 1016	7400	ug/kg	10 U	12 U	12 U	10 U	11 UJ	11 UJ	11 U	11 UJ	12 UJ
Arochlor 1221	140	ug/kg	14 U	15 U	15 U	13 U	14 UJ	14 UJ	14 U	14 UJ	15 UJ
Arochlor 1232	140	ug/kg	6.3 U	7.1 U	7 U	6.1 U	6.5 UJ	6.4 UJ	6.4 U	6.6 UJ	6.9 UJ
Arochlor 1242	740	ug/kg	5.2 U	5.9 U	5.9 U	5.1 U	5.4 UJ	5.4 UJ	5.4 U	5.5 UJ	5.8 UJ
Arochlor 1248	740	ug/kg	8.4 U	9.4 U	9.4 U	8.1 U	8.6 UJ	8.6 UJ	8.6 U	8.8 UJ	9.3 UJ
Arochlor 1254	740	ug/kg	14 U	15 U	15 U	13 U	14 UJ	14 UJ	14 U	14 UJ	15 UJ
Arochlor 1260	740	ug/kg	10 U	12 U	12 UJ	10 U	11 UJ	11 UJ	11 U	11 UJ	12 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT J2	DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	10 U	10 U	60 U	10 U	10 U	12 U	10 UJ	11 UJ
Arochlor 1221	140	ug/kg	13 U	14 U	78 U	13 U	14 U	16 U	14 U	14 U
Arochlor 1232	140	ug/kg	6.1 U	6.2 U	36 U	6 U	6.3 U	7.2 U	6.2 U	6.7 U
Arochlor 1242	740	ug/kg	5.1 U	5.2 U	30 U	5 U	5.2 U	6 U	5.2 U	5.6 U
Arochlor 1248	740	ug/kg	8.2 U	8.3 U	48 U	8 U	8.4 U	9.6 U	8.3 U	8.9 U
Arochlor 1254	740	ug/kg	13 U	14 U	78 U	13 U	14 U	16 U	14 U	14 U
Arochlor 1260	740	ug/kg	10 U	10 U	60 U	10 U	10 U	12 U	10 UJ	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2	DUT K2
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/29/2019								
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	11 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 UJ	10 UJ	12 U
Arochlor 1221	140	ug/kg	14 U	14 U	14 U	14 U	15 UJ	15 UJ	13 U	16 U
Arochlor 1232	140	ug/kg	6.4 U	6.5 U	6.5 U	6.2 U	6.9 UJ	6.9 UJ	6.1 U	7.3 U
Arochlor 1242	740	ug/kg	5.3 U	5.4 U	5.4 U	5.2 U	5.7 UJ	5.8 UJ	5 U	6 U
Arochlor 1248	740	ug/kg	8.5 U	8.7 U	8.6 U	8.3 U	9.2 UJ	9.2 UJ	8.1 U	9.7 U
Arochlor 1254	740	ug/kg	14 U	14 U	14 U	14 U	15 UJ	15 UJ	13 U	16 U
Arochlor 1260	740	ug/kg	11 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 UJ	10 UJ	12 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5	DUT K5	DUT K5
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
Date		7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/30/2019	7/30/2019	7/30/2019
Chemical	CC	Units								
Arochlor 1016	7400	ug/kg	9.9 U	12 U	11 U	10 U	12 U	12 U	10 U	11 U
Arochlor 1221	140	ug/kg	13 U	15 U	14 U	13 U	16 U	16 U	13 U	14 U
Arochlor 1232	140	ug/kg	5.9 U	6.9 U	6.5 U	6.1 U	7.4 U	7.3 U	6.2 U	6.7 U
Arochlor 1242	740	ug/kg	4.9 U	5.8 U	5.4 U	5.1 U	6.1 U	6.1 U	5.2 U	5.5 U
Arochlor 1248	740	ug/kg	7.9 U	9.2 U	8.7 U	8.1 U	9.8 U	9.7 U	8.3 U	8.9 U
Arochlor 1254	740	ug/kg	13 U	15 U	14 U	13 U	16 U	16 U	13 U	14 U
Arochlor 1260	740	ug/kg	9.9 U	12 U	11 U	10 U	12 U	12 U	10 UJ	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2	DUT L3	DUT L3	DUT L3	
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
Date		7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	
Chemical	CC	Units									
Arochlor 1016	7400	ug/kg	11 U	10 U	12 U	10 U	12 U	12 U	11 U	13 U	12 U
Arochlor 1221	140	ug/kg	14 U	14 U	16 U	14 U	15 U	15 U	15 U	16 U	16 U
Arochlor 1232	140	ug/kg	6.6 U	6.3 U	7.4 U	6.3 U	7.1 U	6.9 U	6.7 U	7.5 U	7.4 U
Arochlor 1242	740	ug/kg	5.5 U	5.2 U	6.2 U	5.2 U	5.9 U	5.8 U	5.6 U	6.3 U	6.1 U
Arochlor 1248	740	ug/kg	8.7 U	8.4 U	9.9 U	8.3 U	9.5 U	9.3 U	8.9 U	10 U	9.8 U
Arochlor 1254	740	ug/kg	14 U	14 U	16 U	14 U	15 U	15 U	15 U	16 U	16 U
Arochlor 1260	740	ug/kg	11 UJ	10 UJ	12 UJ	10 UJ	12 UJ	12 UJ	11 UJ	13 UJ	12 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 4
DUTRA PCB RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT L4	DUT L4	DUT L4	DUT L5	DUT L5	DUT L5
Depth (Feet)		0-5	5-10	10-15	0-5	5-10	10-15
Date		7/30/2019	7/30/2019	7/30/2019	7/31/2019	7/31/2019	7/31/2019
Chemical	CC	Units					
Arochlor 1016	7400	ug/kg	11 U	10 U	12 U	11 UJ	11 UJ
Arochlor 1221	140	ug/kg	14 U	13 U	16 U	14 UJ	14 UJ
Arochlor 1232	140	ug/kg	6.3 U	6.2 U	7.3 U	6.6 UJ	6.5 UJ
Arochlor 1242	740	ug/kg	5.3 U	5.1 U	6.1 U	5.5 UJ	5.4 UJ
Arochlor 1248	740	ug/kg	8.5 U	8.2 U	9.7 U	8.7 UJ	8.7 UJ
Arochlor 1254	740	ug/kg	14 U	13 U	16 U	14 UJ	14 UJ
Arochlor 1260	740	ug/kg	11 UJ	10 UJ	12 UJ	11 UJ	11 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT A1	DUT A1	DUT A1	DUT A2	DUT A2	DUT A2	DUT A3	DUT A3
			0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10
			Date	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
4,4'-DDD		ug/kg	0.36 J	2	0.25 U	0.22 U	2.7 J	0.22 UJ	0.27 J	1.7
4,4'-DDE		ug/kg	0.15 J	1.2	0.54 J	0.22 U	1.2 J	0.4 J	0.17 J	1.2
4,4'-DDT		ug/kg	0.16 J	0.68 J	0.27 J	0.22 UJ	0.8 J	0.22 UJ	0.24 J	0.75 J
Total DDTs	46	ug/kg	0.67 J	3.88 J	1.06 J	0.66 U	4.7 J	0.84 J	0.68 J	3.65 J
Aldrin	290	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.31 U	0.35 U	0.51 J	0.33 U	0.33 UJ	0.33 UJ	0.35 U	0.35 U
Chlordane	16000	ug/kg	3.5 UJ	3.9 UJ	4.2 UJ	3.6 UJ	3.7 UJ	3.6 UJ	3.9 UJ	3.9 UJ
Dieldren	8	ug/kg	0.21 UJ	0.23 U	0.25 U	0.22 U	0.32 J	0.22 UJ	0.23 U	0.13 J
Endosulfan I	3700000	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Endosulfan II	3700000	ug/kg	0.21 UJ	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Endrin	45	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Heptachlor	1100	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Heptachlor Epoxide	53	ug/kg	0.21 U	0.23 U	0.25 U	0.22 U	0.22 UJ	0.22 UJ	0.23 U	0.23 U
Methoxychlor	310000	ug/kg	0.31 UJ	0.35 UJ	0.37 UJ	0.33 UJ	0.33 UJ	0.33 UJ	0.35 UJ	0.35 UJ
Toxaphene	4400	ug/kg	6.8 UJ	7.6 UJ	8.1 UJ	7 UJ	7.2 UJ	7.1 UJ	7.6 UJ	7.6 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT A3	DUT A4	DUT A4	DUT A4	DUT B1	DUT B1	DUT B1	DUT B2
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
4,4'-DDD		ug/kg	2.6 J	0.48 J	2.2 J	1.2 J	1.1 J	3.2 J	0.26 U	1.6
4,4'-DDE		ug/kg	1.4 J	0.1 J	0.62 J	0.38 J	0.28 J	1	0.26 U	1.6
4,4'-DDT		ug/kg	0.23 UJ	0.21 UJ	0.18 J	0.26 UJ	0.22 UJ	0.24 UJ	0.26 U	0.54 J
Total DDTs	46	ug/kg	4.23 J	0.79 J	3 J	1.84 J	1.6 J	4.44 J	0.78 U	3.74 J
Aldrin	290	ug/kg	0.23 UJ	0.21 UJ	0.24 U	0.26 U	0.22 U	0.24 U	0.26 U	0.21 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.23 UJ	0.21 UJ	0.24 U	0.26 U	0.22 U	0.24 U	0.26 U	0.21 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.34 UJ	0.31 UJ	0.35 U	0.38 U	0.33 U	0.36 U	0.39 U	0.32 U
Chlordane	16000	ug/kg	3.8 UJ	3.5 UJ	4 U	4.3 U	3.7 U	4 U	4.3 U	3.6 U
Dieldren	8	ug/kg	0.54 J	0.21 UJ	0.24 U	0.26 U	0.22 U	0.24 U	0.26 U	0.21 U
Endosulfan I	3700000	ug/kg	0.23 UJ	0.21 UJ	0.24 U	0.26 U	0.22 U	0.24 U	0.26 U	0.21 U
Endosulfan II	3700000	ug/kg	0.23 UJ	0.21 UJ	0.24 U	0.26 U	0.22 U	0.24 U	0.26 U	0.21 U
Endrin	45	ug/kg	0.23 UJ	0.21 UJ	0.24 UJ	0.26 UJ	0.22 UJ	0.24 UJ	0.26 U	0.21 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.23 UJ	0.21 UJ	0.24 UJ	0.26 UJ	0.22 UJ	0.24 UJ	0.26 U	0.21 U
Heptachlor	1100	ug/kg	0.23 UJ	0.21 UJ	0.24 UJ	0.26 UJ	0.22 UJ	0.24 UJ	0.26 U	0.21 U
Heptachlor Epoxide	53	ug/kg	0.23 UJ	0.21 UJ	0.24 U	0.26 U	0.22 U	0.24 U	0.26 U	0.21 U
Methoxychlor	310000	ug/kg	0.34 UJ	0.31 UJ	0.35 UJ	0.38 UJ	0.33 UJ	0.36 UJ	0.39 U	0.32 U
Toxaphene	4400	ug/kg	7.4 UJ	6.8 UJ	7.7 UJ	8.3 UJ	7.1 UJ	7.8 UJ	8.4 U	7 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT B2	DUT B2	DUT B3	DUT B3	DUT B3	DUT B4	DUT B4	DUT B4
			5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/17/2019	7/17/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
4,4'-DDD		ug/kg	3 J	2.7 J	1.2 J	1.3 J	1.5 J	0.77 J	33 J	0.24 UJ
4,4'-DDE		ug/kg	1.7 J	1.1 J	0.28 J	0.6 J	0.62 J	1.2 J	5.2 J	0.24 UJ
4,4'-DDT		ug/kg	1.1 J	0.89 J	0.52 J	0.5 J	1.5 J	0.58 J	140 J	0.24 UJ
Total DDTs	46	ug/kg	5.8 J	4.69 J	2 J	2.4 J	3.62 J	2.55 J	178.2 J	0.72 UJ
Aldrin	290	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Alpha-hexachlorocyclohexane	770	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Beta-hexachlorocyclohexane	2700	ug/kg	0.33 UJ	0.34 UJ	0.32 UJ	0.31 UJ	0.33 UJ	0.3 UJ	0.32 UJ	0.36 UJ
Chlordane	16000	ug/kg	3.7 UJ	3.8 UJ	3.6 UJ	3.4 UJ	3.7 UJ	3.3 UJ	3.5 UJ	4 UJ
Dieldren	8	ug/kg	0.22 UJ	0.19 J	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Endosulfan I	3700000	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Endosulfan II	3700000	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Endrin	45	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
gamma-hexachlorocyclohexane	5200	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Heptachlor	1100	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Heptachlor Epoxide	53	ug/kg	0.22 UJ	0.23 UJ	0.21 UJ	0.2 UJ	0.22 UJ	0.2 UJ	0.21 UJ	0.24 UJ
Methoxychlor	310000	ug/kg	0.33 UJ	0.34 UJ	0.32 UJ	0.31 UJ	0.33 UJ	0.3 UJ	0.32 UJ	0.36 UJ
Toxaphene	4400	ug/kg	7.1 UJ	7.4 UJ	6.9 UJ	6.6 UJ	7.1 UJ	6.4 UJ	6.9 UJ	7.8 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT B5	DUT B5	DUT B5	DUT C1	DUT C1	DUT C1	DUT C2	DUT C2
			0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10
			Date	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
4,4'-DDD		ug/kg	0.12 J	0.23 J	1.4 J	0.85 J	3.7 J	0.25 UJ	1.5 J	0.91 J
4,4'-DDE		ug/kg	0.21 UJ	0.12 J	1.2 J	0.24 J	0.64 J	0.21 J	0.4 J	0.96 J
4,4'-DDT		ug/kg	0.21 UJ	0.21 UJ	0.63 J	0.59 J	0.66 J	0.25 UJ	0.62 J	0.44 J
Total DDTs	46	ug/kg	0.54 J	0.56 J	3.23 J	1.68 J	5 J	0.71 J	2.52 J	2.31 J
Aldrin	290	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Alpha-hexachlorocyclohexane	770	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Beta-hexachlorocyclohexane	2700	ug/kg	0.31 UJ	0.32 UJ	0.34 UJ	0.31 UJ	0.32 UJ	0.37 UJ	0.33 UJ	0.34 UJ
Chlordane	16000	ug/kg	3.4 UJ	3.5 UJ	3.8 UJ	3.5 UJ	3.6 UJ	4.1 UJ	3.7 UJ	3.8 UJ
Dieldren	8	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Endosulfan I	3700000	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Endosulfan II	3700000	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Endrin	45	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
gamma-hexachlorocyclohexane	5200	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Heptachlor	1100	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Heptachlor Epoxide	53	ug/kg	0.21 UJ	0.21 UJ	0.23 UJ	0.21 UJ	0.21 UJ	0.25 UJ	0.22 UJ	0.22 UJ
Methoxychlor	310000	ug/kg	0.31 UJ	0.32 UJ	0.34 UJ	0.31 UJ	0.32 UJ	0.37 UJ	0.33 UJ	0.34 UJ
Toxaphene	4400	ug/kg	6.7 UJ	6.9 UJ	7.4 UJ	6.8 UJ	7 UJ	8 UJ	7.1 UJ	7.3 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT C2	DUT C3	DUT C3	DUT C3	DUT C4	DUT C4	DUT C4	DUT C5
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/18/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019
4,4'-DDD		ug/kg	0.33 J-	1.4	0.78 J	0.62 J	3.4	1.3	0.5 J	0.2 J
4,4'-DDE		ug/kg	0.19 J-	0.4 J	0.42 J	0.58 J	1.1	0.37 J	0.34 J	0.12 J
4,4'-DDT		ug/kg	0.14 J-	0.67 J	0.43 J	0.82 J	1 J	0.43 J	0.23 J	0.2 UJ
Total DDTs	46	ug/kg	0.66 J-	2.47 J	1.63 J	2.02 J	5.5 J	2.1 J	1.07 J	0.52 J
Aldrin	290	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.33 UJ	0.32 U	0.32 U	0.33 U	0.34 U	0.35 U	0.34 U	0.3 U
Chlordane	16000	ug/kg	3.7 UJ	3.5 U	3.6 U	3.7 U	3.8 U	3.9 U	3.8 U	3.4 U
Dieldren	8	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Endosulfan I	3700000	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Endosulfan II	3700000	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Endrin	45	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Heptachlor	1100	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Heptachlor Epoxide	53	ug/kg	0.22 UJ	0.21 U	0.21 U	0.22 U	0.23 U	0.23 U	0.23 U	0.2 U
Methoxychlor	310000	ug/kg	0.33 UJ	0.32 U	0.32 U	0.33 U	0.34 U	0.35 U	0.34 U	0.3 U
Toxaphene	4400	ug/kg	7.1 UJ	6.8 U	6.9 U	7.2 U	7.4 U	7.6 U	7.4 U	6.6 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT C5	DUT C5	DUT D1	DUT D1	DUT D1	DUT D2	DUT D2	DUT D2	
			Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	7/19/2019	
4,4'-DDD		ug/kg	1.4 J	0.63 J	1	1.7	0.22 U	1.1	0.78 J	0.25 U	
4,4'-DDE		ug/kg	1.7	0.69 J	0.29 J	1.2	0.22 U	0.85	0.45 J	0.25 U	
4,4'-DDT		ug/kg	0.8 UJ	0.45 J	0.35 J	0.85 J	0.22 UJ	0.44 J	0.45 J	0.25 UJ	
Total DDTs	46	ug/kg	3.9 J	1.77 J	1.64 J	3.75 J	0.66 U	2.39 J	1.68 J	0.75 U	
Aldrin	290	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Alpha-hexachlorocyclohexane	770	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Beta-hexachlorocyclohexane	2700	ug/kg	0.35 U	0.33 U	0.32 U	0.31 U	0.34 U	0.3 U	0.32 U	0.38 U	
Chlordane	16000	ug/kg	3.9 U	3.7 U	3.6 U	3.5 U	3.8 U	3.3 U	3.5 U	4.2 U	
Dieldren	8	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Endosulfan I	3700000	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Endosulfan II	3700000	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Endrin	45	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
gamma-hexachlorocyclohexane	5200	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Heptachlor	1100	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Heptachlor Epoxide	53	ug/kg	0.23 U	0.22 U	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.25 U	
Methoxychlor	310000	ug/kg	0.35 U	0.33 U	0.32 U	0.31 UJ	0.34 UJ	0.3 UJ	0.32 UJ	0.38 UJ	
Toxaphene	4400	ug/kg	7.6 U	7.2 U	6.9 U	6.7 UJ	7.3 UJ	6.4 UJ	6.9 UJ	8.2 UJ	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT D3	DUT D3	DUT D3	DUT D4	DUT D4	DUT D5	DUT D5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/19/2019	7/19/2019	7/19/2019	7/22/2019	7/22/2019	7/22/2019
4,4'-DDD		ug/kg	0.29 J	1.1	1.1	0.26 J	2.7 J	1.3	0.33 J
4,4'-DDE		ug/kg	0.18 J	0.76 J	0.63 J	0.16 J	1.2 J	1.6	0.21 UJ
4,4'-DDT		ug/kg	0.2 J	0.54 J	0.6 J	0.21 U	1.1 J	0.4 J	0.17 J
Total DDTs	46	ug/kg	0.67 J	2.4 J	2.33 J	0.63 J	5 J	3.3 J	0.71 J
Aldrin	290	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Alpha-hexachlorocyclohexane	770	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Beta-hexachlorocyclohexane	2700	ug/kg	0.3 U	0.32 U	0.36 U	0.32 U	0.34 UJ	0.35 U	0.31 UJ
Chlordane	16000	ug/kg	3.4 U	3.6 U	4 U	3.5 U	3.8 UJ	3.9 U	3.5 UJ
Dielldren	8	ug/kg	0.2 U	0.21 U	0.24 U	0.2 UJ	0.23 UJ	0.3 J	0.21 UJ
Endosulfan I	3700000	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Endosulfan II	3700000	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Endrin	45	ug/kg	0.2 U	0.21 U	0.24 U	0.2 UJ	0.23 UJ	0.23 UJ	0.21 UJ
gamma-hexachlorocyclohexane	5200	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Heptachlor	1100	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Heptachlor Epoxide	53	ug/kg	0.2 U	0.21 U	0.24 U	0.21 U	0.23 UJ	0.23 U	0.21 UJ
Methoxychlor	310000	ug/kg	0.3 UJ	0.32 UJ	0.36 UJ	0.32 U	0.34 UJ	0.35 U	0.31 UJ
Toxaphene	4400	ug/kg	6.6 UJ	6.9 UJ	7.7 UJ	6.8 U	7.5 UJ	7.6 U	6.8 UJ
									7 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT D5	DUT E1	DUT E1	DUT E1	DUT E2	DUT E2	DUT E2	DUT E3
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/22/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/31/2019	7/22/2019
4,4'-DDD		ug/kg	0.32 J	1.7 J	0.24 UJ	0.25 UJ	1.3	0.23 U	2 J	0.98
4,4'-DDE		ug/kg	0.22 J	0.37 J	0.32 J	0.25 UJ	3.7	0.23 U	0.55 J	0.4 J
4,4'-DDT		ug/kg	0.22 U	3.3	0.61 J	0.25 UJ	1.1 J	0.23 UJ	1.4	1.2
Total DDTs	46	ug/kg	0.76 J	5.37 J	1.17 J	0.75 UJ	6.1 J	0.69 U	3.95 J	2.58 J
Aldrin	290	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.32 U	0.3 U	0.36 UJ	0.38 UJ	0.34 U	0.35 U	0.33 U	0.31 U
Chlordane	16000	ug/kg	3.6 U	3.4 U	4 UJ	4.2 UJ	3.8 U	3.9 U	3.6 U	3.5 U
Dieldren	8	ug/kg	0.22 UJ	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 UJ
Endosulfan I	3700000	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Endosulfan II	3700000	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Endrin	45	ug/kg	0.22 UJ	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 UJ
gamma-hexachlorocyclohexane	5200	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Heptachlor	1100	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Heptachlor Epoxide	53	ug/kg	0.22 U	0.2 U	0.24 UJ	0.25 UJ	0.22 U	0.23 U	0.22 U	0.21 U
Methoxychlor	310000	ug/kg	0.32 U	0.3 U	0.36 UJ	0.38 UJ	0.34 U	0.35 UJ	0.33 U	0.31 U
Toxaphene	4400	ug/kg	7 U	180 J	7.9 UJ	8.2 UJ	7.3 U	1100 J	79 J	6.8 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT E3	DUT E3	DUT E4	DUT E4	DUT E4	DUT E5	DUT E5	DUT E5	
			Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/22/2019	7/23/2019	7/23/2019	7/23/2019
4,4'-DDD		ug/kg	0.16 J	0.42 J	3	0.98 J	1.2 J	0.67 J	1.7	1.1	
4,4'-DDE		ug/kg	0.39 J	0.1 J	2.7	1	0.56 J	0.31 J	0.73 J	0.55 J	
4,4'-DDT		ug/kg	0.23 U	0.23 UJ	0.78 J	0.46 J	0.25 J	0.23 UJ	0.29 UJ	0.37 UJ	
Total DDTs	46	ug/kg	0.78 J	0.75 J	6.48 J	2.44 J	2.01 J	1.21 J	2.72 J	2.02 J	
Aldrin	290	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Alpha-hexachlorocyclohexane	770	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Beta-hexachlorocyclohexane	2700	ug/kg	0.35 U	0.34 UJ	0.36 U	0.35 U	0.33 UJ	0.32 U	0.34 U	0.34 U	
Chlordane	16000	ug/kg	3.9 U	3.8 UJ	4 U	3.9 U	3.7 UJ	3.6 U	3.8 U	3.8 U	
Diethyl	8	ug/kg	0.23 UJ	0.23 UJ	0.28 J	0.24 UJ	0.22 UJ	0.21 U	0.23 U	0.22 U	
Endosulfan I	3700000	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Endosulfan II	3700000	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Endrin	45	ug/kg	0.23 UJ	0.23 UJ	0.24 UJ	0.24 UJ	0.22 UJ	0.21 U	0.23 U	0.22 U	
gamma-hexachlorocyclohexane	5200	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Heptachlor	1100	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Heptachlor Epoxide	53	ug/kg	0.23 U	0.23 UJ	0.24 U	0.23 U	0.22 UJ	0.21 U	0.23 U	0.22 U	
Methoxychlor	310000	ug/kg	0.35 U	0.34 UJ	0.36 U	0.35 U	0.33 UJ	0.32 U	0.34 U	0.34 U	
Toxaphene	4400	ug/kg	7.5 U	7.5 UJ	7.8 U	7.5 U	7.1 UJ	6.9 U	7.3 U	7.3 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT F1	DUT F1	DUT F1	DUT F2	DUT F2	DUT F2	DUT F3	DUT F3
			0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10
			Date	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
4,4'-DDD		ug/kg	0.55 J	0.62 J	0.77 UJ	0.61 J	1.4 J	1.1 U	1	0.76 J
4,4'-DDE		ug/kg	0.19 J	0.22 J	0.23 J	0.2 J	1.7	1.1 U	0.37 J	0.96 J
4,4'-DDT		ug/kg	0.26 UJ	0.53 UJ	0.36 UJ	0.7 UJ	0.96 J	1.1 UJ	0.38 J	0.41 J
Total DDTs	46	ug/kg	1 J	1.37 J	1.36 J	1.51 J	4.06 J	3.3 U	1.75 J	2.13 J
Aldrin	290	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.32 U	0.32 U	0.32 U	0.31 U	0.34 U	1.7 U	0.32 U	0.34 U
Chlordane	16000	ug/kg	3.5 U	3.6 U	3.6 U	3.5 U	3.8 U	19 U	3.5 U	3.8 U
Dieldren	8	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Endosulfan I	3700000	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Endosulfan II	3700000	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Endrin	45	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Heptachlor	1100	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Heptachlor Epoxide	53	ug/kg	0.21 U	0.22 U	0.21 U	0.21 U	0.23 U	1.1 U	0.21 U	0.23 U
Methoxychlor	310000	ug/kg	0.32 U	0.32 U	0.32 UJ	0.31 U	0.34 UJ	1.7 U	0.32 U	0.34 UJ
Toxaphene	4400	ug/kg	6.9 U	7 U	7 UJ	6.7 U	7.4 UJ	37 U	6.9 U	7.5 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT F3	DUT F4	DUT F4	DUT F4	DUT F5	DUT F5	DUT F5	DUT G1
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019	7/23/2019
4,4'-DDD		ug/kg	0.4 J	0.35 J	0.86 J	0.22 UJ	0.15 J	0.54 J	0.21 UJ	0.64 J
4,4'-DDE		ug/kg	0.37 J	0.24 J	0.63 J	0.12 J	0.2 U	0.29 J	0.27 J	0.18 J
4,4'-DDT		ug/kg	0.23 UJ	0.3 J	0.39 J	0.22 UJ	0.2 UJ	0.22 J	0.21 UJ	0.14 J
Total DDTs	46	ug/kg	1 J	0.89 J	1.88 J	0.56 J	0.55 J	1.05 J	0.69 J	0.96 J
Aldrin	290	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.35 U	0.31 U	0.3 U	0.32 U	0.3 U	0.31 U	0.32 U	0.32 U
Chlordane	16000	ug/kg	3.9 U	3.5 U	3.4 U	3.6 U	3.4 U	3.5 U	3.6 U	3.6 U
Dieldren	8	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Endosulfan I	3700000	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Endosulfan II	3700000	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Endrin	45	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Heptachlor	1100	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Heptachlor Epoxide	53	ug/kg	0.23 U	0.21 U	0.2 U	0.22 U	0.2 U	0.21 U	0.21 U	0.22 U
Methoxychlor	310000	ug/kg	0.35 UJ	0.31 U	0.3 UJ	0.32 UJ	0.3 U	0.31 UJ	0.32 UJ	0.32 UJ
Toxaphene	4400	ug/kg	7.5 UJ	6.8 U	6.5 UJ	7 UJ	6.5 U	6.7 UJ	7 UJ	7 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT G1	DUT G1	DUT G2	DUT G2	DUT G2	DUT G3	DUT G3	DUT G3	
			Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/23/2019	7/23/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
4,4'-DDD		ug/kg	1.5 J	0.28 J	1.2 J	1.6 J	0.25 UJ	0.92 J	1.7 J	0.26 UJ	
4,4'-DDE		ug/kg	0.65 J	0.46 J	0.3 J	0.65 J	0.22 J	1.1 J	0.61 J	0.28 J	
4,4'-DDT		ug/kg	0.39 J	0.15 J	0.64 J	0.78 J	0.17 J	0.64 J	0.56 J	0.2 J	
Total DDTs	46	ug/kg	2.54 J	0.89 J	2.14 J	3.03 J	0.64 J	2.66 J	2.87 J	0.74 J	
Aldrin	290	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Alpha-hexachlorocyclohexane	770	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Beta-hexachlorocyclohexane	2700	ug/kg	0.35 U	0.33 U	0.31 UJ	0.3 UJ	0.38 UJ	0.31 UJ	0.36 UJ	0.39 UJ	
Chlordane	16000	ug/kg	3.9 U	3.7 U	3.5 UJ	3.4 UJ	4.2 UJ	3.4 UJ	4 UJ	4.3 UJ	
Dieldren	8	ug/kg	0.12 J	0.22 UJ	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Endosulfan I	3700000	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Endosulfan II	3700000	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Endrin	45	ug/kg	0.23 U	0.22 UJ	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
gamma-hexachlorocyclohexane	5200	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Heptachlor	1100	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Heptachlor Epoxide	53	ug/kg	0.23 U	0.22 U	0.21 UJ	0.2 UJ	0.25 UJ	0.2 UJ	0.24 UJ	0.26 UJ	
Methoxychlor	310000	ug/kg	0.35 UJ	0.33 U	0.31 UJ	0.3 UJ	0.38 UJ	0.31 UJ	0.36 UJ	0.39 UJ	
Toxaphene	4400	ug/kg	7.5 UJ	7.2 U	6.8 UJ	6.6 UJ	8.1 UJ	6.6 UJ	7.8 UJ	8.4 UJ	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT G4	DUT G4	DUT G4	DUT G5	DUT G5	DUT G5	DUT H1	DUT H1
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5
			Date	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
4,4'-DDD		ug/kg	0.57 J	3.6 J	0.24 UJ	0.44 J	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
4,4'-DDE		ug/kg	0.58 J	0.25 UJ	0.24 UJ	0.2 UJ	0.62 J	0.18 J	0.29 J	0.25 UJ
4,4'-DDT		ug/kg	1.5 J	0.85 J	0.19 J	0.47 J	0.52 J	0.25 UJ	0.25 J	0.25 UJ
Total DDTs	46	ug/kg	2.65 J	4.7 J	0.67 J	1.11 J	1.36 J	0.68 J	0.77 J	0.75 UJ
Aldrin	290	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Alpha-hexachlorocyclohexane	770	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Beta-hexachlorocyclohexane	2700	ug/kg	0.39 UJ	0.37 UJ	0.36 UJ	0.3 UJ	0.33 UJ	0.37 UJ	0.34 UJ	0.37 UJ
Chlordane	16000	ug/kg	4.4 UJ	4.1 UJ	4 UJ	3.4 UJ	3.7 UJ	4.2 UJ	3.8 UJ	4.1 UJ
Dieldren	8	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Endosulfan I	3700000	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Endosulfan II	3700000	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Endrin	45	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
gamma-hexachlorocyclohexane	5200	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Heptachlor	1100	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Heptachlor Epoxide	53	ug/kg	0.26 UJ	0.25 UJ	0.24 UJ	0.2 UJ	0.22 UJ	0.25 UJ	0.23 UJ	0.25 UJ
Methoxychlor	310000	ug/kg	0.39 UJ	0.37 UJ	0.36 UJ	0.3 UJ	0.33 UJ	0.37 UJ	0.34 UJ	0.37 UJ
Toxaphene	4400	ug/kg	8.5 UJ	8 UJ	7.8 UJ	6.5 UJ	7.2 UJ	8.1 UJ	7.5 UJ	8 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT H1	DUT H2	DUT H2	DUT H2	DUT H3	DUT H3	DUT H3	DUT H4
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/25/2019	7/25/2019	7/25/2019
4,4'-DDD		ug/kg	0.26 UJ	0.75 J	0.24 UJ	0.24 UJ	1.2	0.24 U	0.25 U	2.6
4,4'-DDE		ug/kg	0.26 UJ	0.19 J	0.4 J	0.24 J	0.57 J	0.24 U	0.25 U	0.58 J
4,4'-DDT		ug/kg	0.26 UJ	0.31 J	0.42 J	0.24 UJ	0.3 J	0.24 UJ	0.25 UJ	1.7 J
Total DDTs	46	ug/kg	0.78 UJ	1.25 J	1.06 J	0.72 J	2.07 J	0.72 U	0.75 U	4.88 J
Aldrin	290	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.39 UJ	0.3 UJ	0.36 UJ	0.36 UJ	0.41 U	0.35 U	0.38 U	0.34 U
Chlordane	16000	ug/kg	4.3 UJ	3.4 UJ	4 UJ	4.1 UJ	4.6 U	3.9 U	4.2 U	3.8 U
Dieldren	8	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Endosulfan I	3700000	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Endosulfan II	3700000	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Endrin	45	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Heptachlor	1100	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Heptachlor Epoxide	53	ug/kg	0.26 UJ	0.2 UJ	0.24 UJ	0.24 UJ	0.28 U	0.24 U	0.25 U	0.22 U
Methoxychlor	310000	ug/kg	0.39 UJ	0.3 UJ	0.36 UJ	0.36 UJ	0.41 UJ	0.35 UJ	0.38 UJ	0.34 UJ
Toxaphene	4400	ug/kg	8.4 UJ	6.5 UJ	7.8 UJ	7.9 UJ	9 UJ	7.7 UJ	8.2 UJ	7.3 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT H4	DUT H4	DUT H5	DUT H5	DUT H5	DUT I1	DUT I1	DUT I1	
			Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
4,4'-DDD		ug/kg	0.78 J	0.64 J	0.27 J	0.3 J	0.25 U	1	0.25 U	0.23 UJ	
4,4'-DDE		ug/kg	0.74 J	0.25 J	0.19 J	0.78 J	0.25 U	0.27 J	0.25 U	0.23 UJ	
4,4'-DDT		ug/kg	0.49 J	0.15 J	0.2 UJ	0.21 UJ	0.25 UJ	0.63 J	0.25 UJ	0.23 UJ	
Total DDTs	46	ug/kg	2.01 J	1.04 J	0.66 J	1.29 J	0.75 U	1.9 J	0.75 U	0.69 UJ	
Aldrin	290	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 U	
Alpha-hexachlorocyclohexane	770	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 U	
Beta-hexachlorocyclohexane	2700	ug/kg	0.31 U	0.32 U	0.3 U	0.32 U	0.37 U	0.3 U	0.37 U	0.35 U	
Chlordane	16000	ug/kg	3.5 U	3.6 U	3.4 U	3.5 U	4.1 U	3.4 U	4.1 U	3.9 U	
Dieldren	8	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 UJ	
Endosulfan I	3700000	ug/kg	0.26 J	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 UJ	
Endosulfan II	3700000	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 UJ	
Endrin	45	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 U	
gamma-hexachlorocyclohexane	5200	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 UJ	
Heptachlor	1100	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 U	
Heptachlor Epoxide	53	ug/kg	0.21 U	0.21 U	0.2 U	0.21 U	0.25 U	0.2 U	0.25 U	0.23 UJ	
Methoxychlor	310000	ug/kg	0.31 UJ	0.32 UJ	0.3 UJ	0.32 UJ	0.37 UJ	0.3 UJ	0.37 UJ	0.35 UJ	
Toxaphene	4400	ug/kg	6.8 UJ	6.9 UJ	6.5 UJ	6.9 UJ	8 UJ	6.6 UJ	8 UJ	7.5 UJ	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT I2	DUT I2	DUT I2	DUT I3	DUT I3	DUT I3	DUT I4	DUT I4
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15	0-5
			Date	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/26/2019
4,4'-DDD		ug/kg	0.63 J	0.47 J	0.47 J	4.1 J	0.23 U	0.24 UJ	13 J	2.1 J
4,4'-DDE		ug/kg	0.72 J	0.23 U	0.22 J	1.5 J	0.23 U	0.24 UJ	1.9	0.65 J
4,4'-DDT		ug/kg	0.83 J	0.23 UJ	0.24 UJ	1.2 J	0.23 UJ	0.24 UJ	0.71 J	0.55 J
Total DDTs	46	ug/kg	2.18 J	0.93 J	0.93 J	6.8 J	0.69 U	0.72 UJ	15.61 J	3.3 J
Aldrin	290	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.31 U	0.34 U	0.35 U	0.33 UJ	0.35 U	0.36 UJ	0.31 U	0.35 U
Chlordane	16000	ug/kg	3.4 U	3.8 U	4 U	3.6 UJ	3.9 U	4.1 UJ	3.5 UJ	3.9 UJ
Dieldren	8	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 UJ
Endosulfan I	3700000	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 UJ
Endosulfan II	3700000	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 UJ
Endrin	45	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 U
Heptachlor	1100	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 U
Heptachlor Epoxide	53	ug/kg	0.21 U	0.23 U	0.24 U	0.22 UJ	0.23 U	0.24 UJ	0.21 U	0.24 U
Methoxychlor	310000	ug/kg	0.31 UJ	0.34 UJ	0.35 UJ	0.33 UJ	0.35 UJ	0.36 UJ	0.31 U	0.35 UJ
Toxaphene	4400	ug/kg	6.7 UJ	7.4 UJ	7.7 UJ	7.1 UJ	7.6 UJ	7.9 UJ	6.8 U	7.6 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT I4	DUT I5	DUT I5	DUT I5	DUT J1	DUT J1	DUT J1	DUT J2
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019
4,4'-DDD		ug/kg	0.23 U	1.4	0.22 UJ	0.21 UJ	1.2	1.5 J	0.23 UJ	1.1
4,4'-DDE		ug/kg	0.44 J	0.44 J	0.15 J	0.35 J	0.52 J	0.43 J	0.23 UJ	0.37 J
4,4'-DDT		ug/kg	0.43 J	1.1 J	0.22 J	0.38 J	0.46 J	0.32 J	0.46 J	0.29 J
Total DDTs	46	ug/kg	1.1 J	2.94 J	0.59 J	0.94 J	2.18 J	2.25 J	0.92 J	1.76 J
Aldrin	290	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.35 U	0.3 U	0.32 UJ	0.32 UJ	0.32 U	0.33 UJ	0.35 UJ	0.31 U
Chlordane	16000	ug/kg	3.9 U	3.4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	3.7 UJ	3.9 UJ	3.4 UJ
Dieldren	8	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Endosulfan I	3700000	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Endosulfan II	3700000	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Endrin	45	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Heptachlor	1100	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Heptachlor Epoxide	53	ug/kg	0.23 U	0.2 U	0.22 UJ	0.21 UJ	0.21 U	0.22 UJ	0.23 UJ	0.2 U
Methoxychlor	310000	ug/kg	0.35 U	0.3 UJ	0.32 UJ	0.32 UJ	0.32 UJ	0.33 UJ	0.35 UJ	0.31 UJ
Toxaphene	4400	ug/kg	7.6 U	6.6 U	7 UJ	7 UJ	7 U	7.2 UJ	7.5 UJ	6.6 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT J2	DUT J2	DUT J3	DUT J3	DUT J3	DUT J4	DUT J4	DUT J4		
			Depth (Feet)	5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15	
			Date	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/26/2019	7/29/2019	7/29/2019	7/29/2019	
4,4'-DDD		ug/kg		1.4 J		1.2 U	2.2	3.6 J	0.24 U	0.7 J	0.22 U	0.21 U
4,4'-DDE		ug/kg		0.61 J		1.2 U	1.5	1.6	0.38 J	0.91 J	0.63 J	0.47 J
4,4'-DDT		ug/kg		0.47 J		1.2 UJ	0.85 J	0.96 J	0.37 J	0.59 J	0.6 J	0.21 UJ
Total DDTs	46	ug/kg		2.48 J		3.6 U	4.55 J	6.16 J	0.99 J	2.2 J	1.45 J	0.89 J
Aldrin	290	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U
Alpha-hexachlorocyclohexane	770	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U
Beta-hexachlorocyclohexane	2700	ug/kg		0.31 U		1.8 U	0.3 U	0.31 U	0.36 U	0.31 U	0.33 U	0.32 U
Chlordane	16000	ug/kg		3.5 UJ		20 UJ	3.4 UJ	3.5 UJ	4 UJ	3.5 UJ	3.7 UJ	3.6 UJ
Dieldren	8	ug/kg		0.21 U		1.2 U	0.2 J	0.21 U	0.24 U	0.21 UJ	0.22 UJ	0.21 UJ
Endosulfan I	3700000	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U
Endosulfan II	3700000	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 UJ	0.22 UJ	0.21 UJ
Endrin	45	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 UJ	0.22 UJ	0.21 UJ
gamma-hexachlorocyclohexane	5200	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U
Heptachlor	1100	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 UJ	0.22 UJ	0.21 UJ
Heptachlor Epoxide	53	ug/kg		0.21 U		1.2 U	0.2 U	0.21 U	0.24 U	0.21 UJ	0.22 UJ	0.21 UJ
Methoxychlor	310000	ug/kg		0.31 UJ		1.8 UJ	0.3 UJ	0.31 UJ	0.36 U	0.31 UJ	0.33 UJ	0.32 UJ
Toxaphene	4400	ug/kg		6.8 U		39 U	6.5 U	6.8 U	7.8 U	6.8 UJ	7.2 UJ	6.9 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT J5	DUT J5	DUT J5	DUT K1	DUT K1	DUT K1	DUT K2	DUT K2
			0-5	5-10	10-15	0-5	5-10	10-15	0-5	5-10
			Date	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019
4,4'-DDD		ug/kg	1.6 J	0.57 J	0.22 U	0.46 J	0.23 UJ	0.23 UJ	0.99	1.7 J
4,4'-DDE		ug/kg	0.54 J	1.1 J	1 J	0.53 J	0.23 UJ	1.2 J	0.45 J	1.4 J
4,4'-DDT		ug/kg	0.67 J	0.26 J	0.22 UJ	0.4 J	0.23 UJ	0.23 UJ	0.44 J	1.5 J
Total DDTs	46	ug/kg	2.81 J	1.93 J	1.44 J	1.39 J	0.69 UJ	1.66 J	1.88 J	4.6 J
Aldrin	290	ug/kg	0.21 U	0.22 U	0.22 U	0.21 U	0.23 UJ	0.23 UJ	0.2 U	0.24 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.21 U	0.22 U	0.22 U	0.21 U	0.23 UJ	0.23 UJ	0.2 U	0.24 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.32 U	0.33 U	0.32 U	0.31 U	0.34 UJ	0.35 UJ	0.3 U	0.36 U
Chlordane	16000	ug/kg	3.6 UJ	3.6 UJ	3.6 UJ	3.5 UJ	3.8 UJ	3.9 UJ	3.4 UJ	4.1 U
Dieldren	8	ug/kg	0.21 UJ	0.22 UJ	0.22 UJ	0.21 UJ	0.23 UJ	0.23 UJ	0.2 UJ	0.67 J
Endosulfan I	3700000	ug/kg	0.21 U	0.22 U	0.22 U	0.21 U	0.23 UJ	0.23 UJ	0.2 U	0.24 U
Endosulfan II	3700000	ug/kg	0.21 UJ	0.22 UJ	0.22 UJ	0.21 UJ	0.23 UJ	0.23 UJ	0.2 UJ	0.24 U
Endrin	45	ug/kg	0.21 UJ	0.22 UJ	0.22 UJ	0.21 UJ	0.23 UJ	0.23 UJ	0.2 UJ	0.24 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.21 U	0.22 U	0.22 U	0.21 U	0.23 UJ	0.23 UJ	0.2 U	0.24 U
Heptachlor	1100	ug/kg	0.21 UJ	0.22 UJ	0.22 UJ	0.21 UJ	0.23 UJ	0.23 UJ	0.2 UJ	0.24 U
Heptachlor Epoxide	53	ug/kg	0.21 UJ	0.22 UJ	0.22 UJ	0.21 UJ	0.23 UJ	0.23 UJ	0.2 UJ	0.24 U
Methoxychlor	310000	ug/kg	0.32 UJ	0.33 UJ	0.32 UJ	0.31 UJ	0.34 UJ	0.35 UJ	0.3 UJ	0.36 UJ
Toxaphene	4400	ug/kg	6.9 UJ	7.1 UJ	7 UJ	6.8 UJ	7.5 UJ	7.5 UJ	6.6 UJ	7.9 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT K2	DUT K3	DUT K3	DUT K3	DUT K4	DUT K4	DUT K4	DUT K5
			Depth (Feet)	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/30/2019
4,4'-DDD		ug/kg	0.24 U	1	2.6 J	2.6 J	0.93	1 J	0.24 U	0.36 J
4,4'-DDE		ug/kg	0.24 U	1.2	2.1 J	1 J	0.38 J	0.68 J	0.24 U	0.21 J
4,4'-DDT		ug/kg	0.24 UJ	0.85 J	0.23 UJ	0.81 J	0.49 J	0.51 J	0.24 UJ	0.76 J
Total DDTs	46	ug/kg	0.72 U	3.05 J	4.93 J	4.41 J	1.8 J	2.19 J	0.72 U	1.33 J
Aldrin	290	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.36 U	0.3 U	0.35 U	0.32 U	0.3 U	0.37 U	0.37 U	0.31 U
Chlordane	16000	ug/kg	4 U	3.3 U	3.9 U	3.6 U	3.4 U	4.1 U	4.1 U	3.5 UJ
Dieldren	8	ug/kg	0.24 U	0.33 J	1 J	0.22 U	0.2 U	0.25 U	0.67 J	0.21 UJ
Endosulfan I	3700000	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 UJ
Endosulfan II	3700000	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 U
Endrin	45	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 U
Heptachlor	1100	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 UJ
Heptachlor Epoxide	53	ug/kg	0.24 U	0.2 U	0.23 U	0.22 U	0.2 U	0.25 U	0.24 U	0.21 U
Methoxychlor	310000	ug/kg	0.36 UJ	0.3 UJ	0.35 UJ	0.32 UJ	0.3 UJ	0.37 UJ	0.37 UJ	0.31 UJ
Toxaphene	4400	ug/kg	7.8 UJ	6.4 UJ	7.5 UJ	7 UJ	6.6 UJ	8 UJ	7.9 UJ	6.7 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT K5	DUT K5	DUT L1	DUT L1	DUT L1	DUT L2	DUT L2	DUT L2
			5-10	10-15	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019
4,4'-DDD		ug/kg	0.22 U	0.22 U	1 J	0.21 U	0.25 U	2.5 J	0.24 U	0.23 U
4,4'-DDE		ug/kg	0.22 U	0.22 U	1.8	0.21 U	0.25 U	0.51 J	0.24 U	0.23 U
4,4'-DDT		ug/kg	0.22 UJ	0.22 UJ	0.92 J	0.21 UJ	0.25 UJ	0.71 J	0.24 UJ	0.23 UJ
Total DDTs	46	ug/kg	0.66 U	0.66 U	3.72 J	0.63 U	0.75 U	3.72 J	0.72 U	0.69 U
Aldrin	290	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.33 U	0.32 U	0.33 U	0.31 U	0.37 U	0.31 U	0.36 U	0.35 U
Chlordane	16000	ug/kg	3.7 UJ	3.6 UJ	3.7 UJ	3.5 UJ	4.1 UJ	3.5 U	4 U	3.9 U
Dieldren	8	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Endosulfan I	3700000	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Endosulfan II	3700000	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Endrin	45	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
gamma-hexachlorocyclohexane	5200	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Heptachlor	1100	ug/kg	0.22 UJ	0.22 UJ	0.22 UJ	0.21 UJ	0.25 UJ	0.21 U	0.24 U	0.23 U
Heptachlor Epoxide	53	ug/kg	0.22 U	0.22 U	0.22 U	0.21 U	0.25 U	0.21 U	0.24 U	0.23 U
Methoxychlor	310000	ug/kg	0.33 UJ	0.32 UJ	0.33 UJ	0.31 UJ	0.37 UJ	0.31 UJ	0.36 UJ	0.35 UJ
Toxaphene	4400	ug/kg	7.2 UJ	7 UJ	7.1 UJ	6.8 UJ	8 UJ	6.8 UJ	7.7 UJ	7.5 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical	CC	Units	DUT L3	DUT L3	DUT L3	DUT L4	DUT L4	DUT L5	DUT L5
			Depth (Feet)	0-5	5-10	10-15	0-5	5-10	10-15
			Date	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/30/2019	7/31/2019
4,4'-DDD		ug/kg	0.56 J	0.25 U	0.25 U	0.35 J	0.21 U	0.24 U	0.22 UJ
4,4'-DDE		ug/kg	0.44 J	0.25 U	0.25 U	0.26 J	0.21 U	0.24 U	0.22 UJ
4,4'-DDT		ug/kg	0.66 J	0.25 UJ	0.25 UJ	0.32 J	0.21 UJ	0.24 UJ	0.22 UJ
Total DDTs	46	ug/kg	1.66 J	0.75 U	0.75 U	0.93 J	0.63 U	0.72 U	0.66 UJ
Aldrin	290	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Alpha-hexachlorocyclohexane	770	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Beta-hexachlorocyclohexane	2700	ug/kg	0.34 U	0.38 U	0.37 U	0.32 U	0.31 U	0.36 U	0.33 UJ
Chlordane	16000	ug/kg	3.7 U	4.2 U	4.1 U	3.5 U	3.4 U	4.1 U	3.7 UJ
Dieldren	8	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Endosulfan I	3700000	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Endosulfan II	3700000	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Endrin	45	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
gamma-hexachlorocyclohexane	5200	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Heptachlor	1100	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Heptachlor Epoxide	53	ug/kg	0.22 U	0.25 U	0.25 U	0.21 U	0.21 U	0.24 U	0.22 UJ
Methoxychlor	310000	ug/kg	0.34 UJ	0.38 UJ	0.37 UJ	0.32 UJ	0.31 UJ	0.36 UJ	0.33 UJ
Toxaphene	4400	ug/kg	7.3 UJ	8.1 UJ	8 UJ	6.9 UJ	6.7 UJ	7.9 UJ	7.1 UJ
									940 J

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 5
DUTRA PESTICIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID		DUT L5	
Depth (Feet)		10-15	
		Date	7/31/2019
Chemical	CC	Units	
4,4'-DDD		ug/kg	0.24 U
4,4'-DDE		ug/kg	0.24 U
4,4'-DDT		ug/kg	0.24 UJ
Total DDTs	46	ug/kg	0.72 U
Aldrin	290	ug/kg	0.24 U
Alpha-hexachlorocyclohexane	770	ug/kg	0.24 U
Beta-hexachlorocyclohexane	2700	ug/kg	0.37 UJ
Chlordane	16000	ug/kg	4.1 U
Dieldren	8	ug/kg	0.24 U
Endosulfan I	3700000	ug/kg	0.24 U
Endosulfan II	3700000	ug/kg	0.24 U
Endrin	45	ug/kg	X
gamma-hexachlorocyclohexane	5200	ug/kg	0.24 U
Heptachlor	1100	ug/kg	0.24 UJ
Heptachlor Epoxide	53	ug/kg	0.24 U
Methoxychlor	310000	ug/kg	0.37 UJ
Toxaphene	4400	ug/kg	7.9 UJ

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014 with EPA Residential RSLs THQ=0.1, Nov 2019

Green - Result exceeds the HPNS CC

μg/kg: micrograms per kilogram

U: Not Detected above the LOD

J: Estimated Value

TABLE 6
DUTRA RADIONUCLIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical		Cesium-137	Cobalt-60	Radium-226	Strontium-90
	CC	0.113	0.252	1.633	0.331
	Units	pCi/g	pCi/g	pCi/g	pCi/g
Location ID	Depth (Feet)	Date			
DUT A1	0-5	7/17/2019	0.07 U	0.2 U	0.642
DUT A1	5-10	7/17/2019	0.07 U	0.0681	1.17
DUT A1	10-15	7/17/2019	0.07 U	0.2 U	1.1
DUT A2	0-5	7/17/2019	0.07 U	0.2 U	0.687
DUT A2	5-10	7/17/2019	0.07 U	0.0522	0.956
DUT A2	10-15	7/17/2019	0.07 U	0.2 U	0.7 U
DUT A3	0-5	7/17/2019	0.07 U	0.2 U	0.57
DUT A3	5-10	7/17/2019	0.07 U	0.2 U	0.827
DUT A3	10-15	7/17/2019	0.07 U	0.2 U	0.754
DUT A4	0-5	7/17/2019	0.07 U	0.2 U	0.556
DUT A4	5-10	7/17/2019	0.07 U	0.0667	0.754
DUT A4	10-15	7/17/2019	0.07 U	0.2 U	0.808
DUT B1	0-5	7/17/2019	0.07 U	0.2 U	0.648
DUT B1	5-10	7/17/2019	0.07 U	0.2 U	0.664
DUT B1	10-15	7/17/2019	0.07 U	0.2 U	0.77
DUT B2	0-5	7/17/2019	0.07 U	0.2 U	0.966
DUT B2	5-10	7/17/2019	0.07 U	0.2 U	0.779
DUT B2	10-15	7/17/2019	0.07 U	0.2 U	0.868
DUT B3	0-5	7/18/2019	0.07 U	0.2 U	0.671
DUT B3	5-10	7/18/2019	0.07 U	0.2 U	0.548
DUT B3	10-15	7/18/2019	0.07 U	0.2 U	0.604
DUT B4	0-5	7/18/2019	0.07 U	0.2 U	0.554
DUT B4	5-10	7/18/2019	0.07 U	0.2 U	0.5
DUT B4	10-15	7/18/2019	0.07 U	0.109	0.951
DUT B5	0-5	7/18/2019	0.07 U	0.2 U	0.5
DUT B5	5-10	7/18/2019	0.07 U	0.2 U	0.7 U
DUT B5	10-15	7/18/2019	0.07 U	0.2 U	0.485
DUT C1	0-5	7/18/2019	0.07 U	0.2 U	0.711
DUT C1	5-10	7/18/2019	0.07 U	0.2 U	0.961
DUT C1	10-15	7/18/2019	0.07 U	0.2 U	0.994
DUT C2	0-5	7/18/2019	0.07 U	0.2 U	0.8
DUT C2	5-10	7/18/2019	0.07 U	0.0676	0.634
DUT C2	10-15	7/18/2019	0.07 U	0.0711	1.09
DUT C3	0-5	7/19/2019	0.07 U	0.2 U	0.837
DUT C3	5-10	7/19/2019	0.07 U	0.2 U	0.518
DUT C3	10-15	7/19/2019	0.07 U	0.2 U	0.756
DUT C4	0-5	7/19/2019	0.07 U	0.2 U	0.726
DUT C4	5-10	7/19/2019	0.07 U	0.2 U	0.617
DUT C4	10-15	7/19/2019	0.07 U	0.2 U	0.718
DUT C5	0-5	7/19/2019	0.07 U	0.2 U	0.646
DUT C5	5-10	7/19/2019	0.07 U	0.2 U	0.847
DUT C5	10-15	7/19/2019	0.07 U	0.2 U	0.763
DUT D1	0-5	7/19/2019	0.07 U	0.2 U	0.621
DUT D1	5-10	7/19/2019	0.07 U	0.2 U	0.652
DUT D1	10-15	7/19/2019	0.07 U	0.2 U	0.931
DUT D2	0-5	7/19/2019	0.07 U	0.2 U	0.716
DUT D2	5-10	7/19/2019	0.07 U	0.2 U	0.581
DUT D2	10-15	7/19/2019	0.07 U	0.081	0.7 U
DUT D3	0-5	7/19/2019	0.07 U	0.2 U	0.452
DUT D3	5-10	7/19/2019	0.07 U	0.2 U	0.412
DUT D3	10-15	7/19/2019	0.07 U	0.2 U	0.875
DUT D4	0-5	7/22/2019	0.07 U	0.2 U	0.574
DUT D4	5-10	7/22/2019	0.07 U	0.2 U	0.903
DUT D4	10-15	7/22/2019	0.07 U	0.2 U	0.7 U
DUT D5	0-5	7/22/2019	0.07 U	0.0339	0.566
DUT D5	5-10	7/22/2019	0.07 U	0.2 U	0.735

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

pCi/g - Average Picocuries Per Gram

U: Not Detected above the LOD

J: Estimated Value

TABLE 6
DUTRA RADIONUCLIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical			Cesium-137	Cobalt-60	Radium-226	Strontium-90
	CC	Units	0.113 pCi/g	0.252 pCi/g	1.633 pCi/g	0.331 pCi/g
Location ID	Depth (Feet)	Date				
DUT D5	10-15	7/22/2019	0.07 U	0.2 U	0.807	0.33 U
DUT E1	0-5	7/31/2019	0.07 U	0.2 U	0.623	0.33 U
DUT E1	5-10	7/31/2019	0.07 U	0.2 U	0.721	0.33 U
DUT E1	10-15	7/31/2019	0.07 U	0.2 U	0.906	0.33 U
DUT E2	0-5	7/31/2019	0.07 U	0.2 U	0.276	0.33 U
DUT E2	5-10	7/31/2019	0.07 U	0.2 U	1.06	0.33 U
DUT E2	10-15	7/31/2019	0.07 U	0.2 U	0.72	0.33 U
DUT E3	0-5	7/22/2019	0.07 U	0.2 U	0.574	0.33 U
DUT E3	5-10	7/22/2019	0.07 U	0.2 U	0.74	0.251
DUT E3	10-15	7/22/2019	0.07 U	0.095	0.751	0.33 U
DUT E4	0-5	7/22/2019	0.07 U	0.2 U	0.644	0.33 U
DUT E4	5-10	7/22/2019	0.07 U	0.2 U	0.831	0.33 U
DUT E4	10-15	7/22/2019	0.07 U	0.2 U	0.761	0.33 U
DUT E5	0-5	7/23/2019	0.07 U	0.2 U	0.763	0.33 U
DUT E5	5-10	7/23/2019	0.07 U	0.2 U	0.729	0.33 U
DUT E5	10-15	7/23/2019	0.07 U	0.2 U	0.847	0.33 U
DUT F1	0-5	7/23/2019	0.07 U	0.2 U	0.664	0.33 U
DUT F1	5-10	7/23/2019	0.07 U	0.2 U	0.77	0.33 U
DUT F1	10-15	7/23/2019	0.07 U	0.2 U	0.752	0.33 U
DUT F2	0-5	7/23/2019	0.07 U	0.2 U	0.861	0.33 U
DUT F2	5-10	7/23/2019	0.07 U	0.2 U	0.728	0.33 U
DUT F2	10-15	7/23/2019	0.07 U	0.0659	1.27	0.33 U
DUT F3	0-5	7/23/2019	0.07 U	0.2 U	0.686	0.33 U
DUT F3	5-10	7/23/2019	0.07 U	0.2 U	0.89	0.33 U
DUT F3	10-15	7/23/2019	0.07 U	0.0914	0.763	0.105
DUT F4	0-5	7/23/2019	0.07 U	0.2 U	0.506	0.33 U
DUT F4	5-10	7/23/2019	0.07 U	0.2 U	0.539	0.0987
DUT F4	10-15	7/23/2019	0.07 U	0.2 U	0.946	0.33 U
DUT F5	0-5	7/23/2019	0.07 U	0.2 U	0.205	0.33 U
DUT F5	5-10	7/23/2019	0.07 U	0.2 U	0.72	0.33 U
DUT F5	10-15	7/23/2019	0.07 U	0.2 U	0.793	0.33 U
DUT G1	0-5	7/23/2019	0.07 U	0.0784	0.64	0.33 U
DUT G1	5-10	7/23/2019	0.07 U	0.2 U	0.903	0.124
DUT G1	10-15	7/23/2019	0.07 U	0.2 U	0.966	0.33 U
DUT G2	0-5	7/24/2019	0.07 U	0.2 U	0.628	0.33 U
DUT G2	5-10	7/24/2019	0.07 U	0.2 U	0.923	0.33 U
DUT G2	10-15	7/24/2019	0.07 U	0.2 U	0.694	0.33 U
DUT G3	0-5	7/24/2019	0.07 U	0.0639	0.691	0.33 U
DUT G3	5-10	7/24/2019	0.07 U	0.2 U	1.09	0.33 U
DUT G3	10-15	7/24/2019	0.07 U	0.2 U	0.981	0.33 U
DUT G4	0-5	7/24/2019	0.07 U	0.2 U	0.404	0.33 U
DUT G4	5-10	7/24/2019	0.07 U	0.2 U	0.7 U	0.33 U
DUT G4	10-15	7/24/2019	0.07 U	0.2 U	1.12	0.33 U
DUT G5	0-5	7/24/2019	0.07 U	0.2 U	0.569	0.33 U
DUT G5	5-10	7/24/2019	0.07 U	0.2 U	0.961	0.33 U
DUT G5	10-15	7/24/2019	0.07 U	0.2 U	0.872	0.33 U
DUT H1	0-5	7/24/2019	0.07 U	0.2 U	1.47	0.33 U
DUT H1	5-10	7/24/2019	0.07 U	0.2 U	0.966	0.33 U
DUT H1	10-15	7/24/2019	0.07 U	0.0474	0.949	0.33 U
DUT H2	0-5	7/24/2019	0.07 U	0.2 U	0.624	0.33 U
DUT H2	5-10	7/24/2019	0.07 U	0.2 U	0.61	0.33 U
DUT H2	10-15	7/24/2019	0.07 U	0.2 U	1.1	0.33 U
DUT H3	0-5	7/25/2019	0.07 U	0.2 U	0.547	0.33 U
DUT H3	5-10	7/25/2019	0.07 U	0.2 U	0.926	0.33 U
DUT H3	10-15	7/25/2019	0.07 U	0.2 U	0.87	0.33 U
DUT H4	0-5	7/25/2019	0.07 U	0.2 U	0.699	0.33 U

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

pCi/g - Average Picocuries Per Gram

U: Not Detected above the LOD

J: Estimated Value

TABLE 6
DUTRA RADIONUCLIDE RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	Cesium-137	Cobalt-60	Radium-226	Strontium-90
			CC	0.113 pCi/g	0.252 pCi/g	1.633 pCi/g	0.331 pCi/g
Units							
DUT H4	5-10	7/25/2019	0.07 U	0.2 U	0.936	0.33 U	
DUT H4	10-15	7/25/2019	0.146	0.2 U	1.23	0.33 U	
DUT H5	0-5	7/25/2019	0.07 U	0.2 U	0.462	0.33 U	
DUT H5	5-10	7/25/2019	0.07 U	0.2 U	0.585	0.33 U	
DUT H5	10-15	7/25/2019	0.07 U	0.2 U	0.924	0.33 U	
DUT I1	0-5	7/25/2019	0.07 U	0.2 U	0.52	0.111	
DUT I1	5-10	7/25/2019	0.07 U	0.2 U	0.68	0.33 U	
DUT I1	10-15	7/25/2019	0.07 U	0.2 U	0.671	0.118	
DUT I2	0-5	7/25/2019	0.07 U	0.2 U	0.678	0.33 U	
DUT I2	5-10	7/25/2019	0.07 U	0.0506	0.826	0.095	
DUT I2	10-15	7/25/2019	0.07 U	0.2 U	0.72	0.33 U	
DUT I3	0-5	7/25/2019	0.07 U	0.2 U	0.99	0.33 U	
DUT I3	5-10	7/25/2019	0.07 U	0.2 U	0.817	0.33 U	
DUT I3	10-15	7/25/2019	0.07 U	0.2 U	1.07	0.33 U	
DUT I4	0-5	7/26/2019	0.07 U	0.2 U	0.629	0.33 U	
DUT I4	5-10	7/26/2019	0.07 U	0.2 U	0.767	0.117	
DUT I4	10-15	7/26/2019	0.07 U	0.0767	0.723	0.16	
DUT I5	0-5	7/26/2019	0.07 U	0.2 U	0.672	0.33 U	
DUT I5	5-10	7/26/2019	0.07 U	0.033	0.733	0.33 U	
DUT I5	10-15	7/26/2019	0.07 U	0.2 U	0.822	0.117	
DUT J1	0-5	7/26/2019	0.07 U	0.2 U	0.759	0.213	
DUT J1	5-10	7/26/2019	0.07 U	0.2 U	0.868	0.125	
DUT J1	10-15	7/26/2019	0.07 U	0.2 U	1.11	0.33 U	
DUT J2	0-5	7/26/2019	0.07 U	0.2 U	0.89	0.33 U	
DUT J2	5-10	7/26/2019	0.07 U	0.2 U	0.809	0.33 U	
DUT J2	10-15	7/26/2019	0.07 U	0.2 U	0.657	0.33 U	
DUT J3	0-5	7/26/2019	0.07 U	0.2 U	0.665	0.33 U	
DUT J3	5-10	7/26/2019	0.07 U	0.2 U	0.79	0.33 U	
DUT J3	10-15	7/26/2019	0.07 U	0.2 U	0.699	0.33 U	
DUT J4	0-5	7/29/2019	0.07 U	0.2 U	0.756	0.33 U	
DUT J4	5-10	7/29/2019	0.07 U	0.2 U	0.631	0.33 U	
DUT J4	10-15	7/29/2019	0.07 U	0.2 U	0.7 U	0.33 U	
DUT J5	0-5	7/29/2019	0.07 U	0.2 U	0.678	0.33 U	
DUT J5	5-10	7/29/2019	0.07 U	0.2 U	0.578	0.33 U	
DUT J5	10-15	7/29/2019	0.07 U	0.2 U	0.809	0.33 U	
DUT K1	0-5	7/29/2019	0.07 U	0.2 U	0.669	0.33 U	
DUT K1	5-10	7/29/2019	0.07 U	0.0515	1.13	0.33 U	
DUT K1	10-15	7/29/2019	0.07 U	0.048	1	0.33 U	
DUT K2	0-5	7/29/2019	0.07 U	0.2 U	0.9	0.33 U	
DUT K2	5-10	7/29/2019	0.07 U	0.2 U	0.902	0.33 U	
DUT K2	10-15	7/29/2019	0.07 U	0.2 U	1.01	0.33 U	
DUT K3	0-5	7/29/2019	0.07 U	0.2 U	0.626	0.117	
DUT K3	5-10	7/29/2019	0.07 U	0.2 U	0.743	0.113	
DUT K3	10-15	7/29/2019	0.07 U	0.0513	0.972	0.33 U	
DUT K4	0-5	7/29/2019	0.07 U	0.2 U	0.763	0.33 U	
DUT K4	5-10	7/29/2019	0.07 U	0.2 U	0.634	0.33 U	
DUT K4	10-15	7/29/2019	0.07 U	0.2 U	1.19	0.33 U	
DUT K5	0-5	7/30/2019	0.07 U	0.2 U	0.7 U	0.33 U	
DUT K5	5-10	7/30/2019	0.07 U	0.2 U	0.7 U	0.33 U	
DUT K5	10-15	7/30/2019	0.07 U	0.0415	0.7 U	0.33 U	
DUT L1	0-5	7/30/2019	0.07 U	0.2 U	0.7 U	0.175	
DUT L1	5-10	7/30/2019	0.07 U	0.2 U	0.7 U	0.33 U	
DUT L1	10-15	7/30/2019	0.07 U	0.2 U	0.7 U	0.129	
DUT L2	0-5	7/30/2019	0.07 U	0.2 U	0.7 U	0.33 U	
DUT L2	5-10	7/30/2019	0.07 U	0.2 U	0.7 U	0.138	
DUT L2	10-15	7/30/2019	0.07 U	0.2 U	0.7 U	0.33 U	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

pCi/g - Average Picocuries Per Gram

U: Not Detected above the LOD

J: Estimated Value

TABLE 6
 DUTRA RADIONUCLIDE RESULTS
 IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
 PARCEL E2, PHASE 3 REMEDIAL ACTION
 HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Chemical		Cesium-137	Cobalt-60	Radium-226	Strontium-90
CC		0.113	0.252	1.633	0.331
Units		pCi/g	pCi/g	pCi/g	pCi/g
Location ID	Depth (Feet)	Date			
DUT L3	0-5	7/30/2019	0.07 U	0.2 U	0.7 U
DUT L3	5-10	7/30/2019	0.07 U	0.2 U	0.7 U
DUT L3	10-15	7/30/2019	0.07 U	0.2 U	0.7 U
DUT L4	0-5	7/30/2019	0.07 U	0.2 U	0.7 U
DUT L4	5-10	7/30/2019	0.07 U	0.0637	0.7 U
DUT L4	10-15	7/30/2019	0.07 U	0.2 U	0.7 U
DUT L5	0-5	7/31/2019	0.07 U	0.2 U	1.17
DUT L5	5-10	7/31/2019	0.07 U	0.2 U	0.794
DUT L5	10-15	7/31/2019	0.07 U	0.2 U	0.695

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

pCi/g - Average Picocuries Per Gram

U: Not Detected above the LOD

J: Estimated Value

TABLE 7
DUTRA TOTAL PETROLEUM HYDROCARBON RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics
			CC	100 mg/kg	100 mg/kg	500 mg/kg
Units						
DUT A1	0-5	7/17/2019		0.25 U	1.6 J	5.4 J
DUT A1	5-10	7/17/2019		0.26 U	4.8	17 J
DUT A1	10-15	7/17/2019		0.34 U	15	40
DUT A2	0-5	7/17/2019		0.24 U	1.1 J	12 U
DUT A2	5-10	7/17/2019		0.29 U	3.3	9.6 J
DUT A2	10-15	7/17/2019		0.26 U	9.4	26
DUT A3	0-5	7/17/2019		0.27 U	1.8 J	6.1 J
DUT A3	5-10	7/17/2019		X	5.2	19 J
DUT A3	10-15	7/17/2019		6.3 UJ	5.9	24
DUT A4	0-5	7/17/2019		5.6 UJ	1.5 J	11 U
DUT A4	5-10	7/17/2019		5.1 UJ	6.4	22 J
DUT A4	10-15	7/17/2019		6.3 UJ	8	23 J
DUT B1	0-5	7/17/2019		5.8 UJ	2.4	8 J
DUT B1	5-10	7/17/2019		6.1 UJ	5.5	16 J
DUT B1	10-15	7/17/2019		6.6 UJ	11	31
DUT B2	0-5	7/17/2019		5.5 U	4.1	16 J
DUT B2	5-10	7/17/2019		5.6 U	6.1	19 J
DUT B2	10-15	7/17/2019		6.1 U	6.3	18 J
DUT B3	0-5	7/18/2019		0.27 U	1.1 U	9.4 J
DUT B3	5-10	7/18/2019		0.23 UJ	3.3	14 J
DUT B3	10-15	7/18/2019		0.25 U	1.1 U	9.6 J
DUT B4	0-5	7/18/2019		0.25 UJ	1 U	9.1 J
DUT B4	5-10	7/18/2019		0.22 UJ	1.1 U	16 J
DUT B4	10-15	7/18/2019		0.27 U	7.2	26
DUT B5	0-5	7/18/2019		X	1 U	4 J
DUT B5	5-10	7/18/2019		0.23 UJ	1.1 U	5.1 J
DUT B5	10-15	7/18/2019		0.24 U	4.7	19 J
DUT C1	0-5	7/18/2019		0.26 U	1 U	7.4 J
DUT C1	5-10	7/18/2019		0.28 U	5.6	60
DUT C1	10-15	7/18/2019		X	13	41
DUT C2	0-5	7/18/2019		X	1.1 U	9.1 J
DUT C2	5-10	7/18/2019		X	3.3	13 J
DUT C2	10-15	7/18/2019		0.25 U	6.3	23
DUT C3	0-5	7/19/2019		0.27 U	2.3	8.7 J
DUT C3	5-10	7/19/2019		0.24 UJ	1.7 J	6.8 J
DUT C3	10-15	7/19/2019		0.27 U	6.7	25
DUT C4	0-5	7/19/2019		0.3 U	8.3	33
DUT C4	5-10	7/19/2019		0.3 U	8.4	33
DUT C4	10-15	7/19/2019		X	4.4	18 J
DUT C5	0-5	7/19/2019		0.24 U	1.4 J	7.1 J
DUT C5	5-10	7/19/2019		X	16	63
DUT C5	10-15	7/19/2019		0.23 U	8.2	32
DUT D1	0-5	7/19/2019		0.24 U	3.1	14 J
DUT D1	5-10	7/19/2019		0.23 U	3.9	17 J
DUT D1	10-15	7/19/2019		0.25 U	8	30
DUT D2	0-5	7/19/2019		0.23 U	3.6	17 J
DUT D2	5-10	7/19/2019		0.25 U	1.7 J	8.3 J
DUT D2	10-15	7/19/2019		0.29 U	12	40
DUT D3	0-5	7/19/2019		0.24 U	1.4 J	7.1 J
DUT D3	5-10	7/19/2019		0.26 U	4.3	18 J
DUT D3	10-15	7/19/2019		0.27 U	18	63
DUT D4	0-5	7/22/2019		0.3 U	1.9 J	7.1 J
DUT D4	5-10	7/22/2019		0.27 U	5.9	20 J
DUT D4	10-15	7/22/2019		0.28 U	5.6	21 J

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 7
DUTRA TOTAL PETROLEUM HYDROCARBON RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics
			CC	100	100	500
			Units	mg/kg	mg/kg	mg/kg
DUT D5	0-5	7/22/2019		0.24 U	3	10 J
DUT D5	5-10	7/22/2019		0.57 U	16	41
DUT D5	10-15	7/22/2019		0.26 U	5.1	16 J
DUT E1	0-5	7/31/2019		16	1.4 J	4.5 J
DUT E1	5-10	7/31/2019		3.4 J	7.7	26
DUT E1	10-15	7/31/2019		3 U	15	42
DUT E2	0-5	7/31/2019		11	3.4	12 J
DUT E2	5-10	7/31/2019		130	4.1	13 J
DUT E2	10-15	7/31/2019		8.3	4.3	14 J
DUT E3	0-5	7/22/2019		0.25 U	2.2	7.6 J
DUT E3	5-10	7/22/2019		0.28 U	6.9	23 J
DUT E3	10-15	7/22/2019		0.23 U	8.3	25
DUT E4	0-5	7/22/2019		0.23 U	3.3	12 J
DUT E4	5-10	7/22/2019		0.25 U	5.7	16 J
DUT E4	10-15	7/22/2019		0.23 U	8.3	21 J
DUT E5	0-5	7/23/2019		0.22 U	1.7 J	6.5 J
DUT E5	5-10	7/23/2019		0.26 U	7.1	20 J
DUT E5	10-15	7/23/2019		0.25 U	9	24
DUT F1	0-5	7/23/2019		0.23 U	1.6 J	5.2 J
DUT F1	5-10	7/23/2019		0.23 U	2.2	6.9 J
DUT F1	10-15	7/23/2019		0.24 U	7.5	18 J
DUT F2	0-5	7/23/2019		0.22 U	1.9 J	5.7 J
DUT F2	5-10	7/23/2019		0.25 U	5.8	19 J
DUT F2	10-15	7/23/2019		0.25 U	5.2	14 J
DUT F3	0-5	7/23/2019		0.22 U	2.4	6.7 J
DUT F3	5-10	7/23/2019		X	4.2	13 J
DUT F3	10-15	7/23/2019		0.28 U	7.2	19 J
DUT F4	0-5	7/23/2019		0.22 U	1.9 J	5.8 J
DUT F4	5-10	7/23/2019		X	3.7	12 J
DUT F4	10-15	7/23/2019		0.21 U	4.4	12 J
DUT F5	0-5	7/23/2019		0.21 UJ	1.2 J	4 J
DUT F5	5-10	7/23/2019		0.21 UJ	2.5	9.2 J
DUT F5	10-15	7/23/2019		0.21 UJ	3.7	12 J
DUT G1	0-5	7/23/2019		0.23 UJ	1.4 J	11 U
DUT G1	5-10	7/23/2019		0.27 UJ	7.2	19 J
DUT G1	10-15	7/23/2019		0.25 UJ	13	44
DUT G2	0-5	7/24/2019		27	13	40
DUT G2	5-10	7/24/2019		15 J	2.9	11 J
DUT G2	10-15	7/24/2019		6.5 J	2.4 J	9 J
DUT G3	0-5	7/24/2019		1.4 J	4.5	23
DUT G3	5-10	7/24/2019		10	14	51
DUT G3	10-15	7/24/2019		2.6 J	9.3	38
DUT G4	0-5	7/24/2019		8.8	2.5 J	10 J
DUT G4	5-10	7/24/2019		2.3 J	13	38
DUT G4	10-15	7/24/2019		2.2 J	22	58
DUT G5	0-5	7/24/2019		2 J	0.85 J	10 U
DUT G5	5-10	7/24/2019		1.3 J	4.5	15 J
DUT G5	10-15	7/24/2019		1.6 J	18	45
DUT H1	0-5	7/24/2019		3.3 J	14	38
DUT H1	5-10	7/24/2019		1.5 J	20	44
DUT H1	10-15	7/24/2019		2 J	13	39
DUT H2	0-5	7/24/2019		2.1 U	1.8 J	5.9 J
DUT H2	5-10	7/24/2019		2.5 J	11	30
DUT H2	10-15	7/24/2019		2.7 U	24	52

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 7
DUTRA TOTAL PETROLEUM HYDROCARBON RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics
			CC	100 mg/kg	100 mg/kg	500 mg/kg
			Units			
DUT H3	0-5	7/25/2019	160 J		1.6 J	14 U
DUT H3	5-10	7/25/2019	2.7 UJ		4.3	12 J
DUT H3	10-15	7/25/2019	2.9 UJ		22	49
DUT H4	0-5	7/25/2019	2.2 U		6.8	23
DUT H4	5-10	7/25/2019	2.2 U		3.4	15 J
DUT H4	10-15	7/25/2019	1.7 U		5.9	23
DUT H5	0-5	7/25/2019	2.1 U		1.3 J	4.8 J
DUT H5	5-10	7/25/2019	2.1 U		3.5	11 J
DUT H5	10-15	7/25/2019	2.9 U		9.9	24 J
DUT I1	0-5	7/25/2019	2.2 U		3	9.4 J
DUT I1	5-10	7/25/2019	2.7 U		17	51
DUT I1	10-15	7/25/2019	3.5 U		16	40
DUT I2	0-5	7/25/2019	2.1 U		3.3	18 J
DUT I2	5-10	7/25/2019	2.6 U		14	54
DUT I2	10-15	7/25/2019	2.8 U		18	55
DUT I3	0-5	7/25/2019	2.6 U		6.6	25
DUT I3	5-10	7/25/2019	2.6 U		16	43
DUT I3	10-15	7/25/2019	3.3 U		22	57
DUT I4	0-5	7/26/2019	2.3 U		13	49
DUT I4	5-10	7/26/2019	1.5 J		12	38
DUT I4	10-15	7/26/2019	2.7 J		17	47
DUT I5	0-5	7/26/2019	3 J		3	11 J
DUT I5	5-10	7/26/2019	2.6 J		12	33
DUT I5	10-15	7/26/2019	2.6 J		9.3	27
DUT J1	0-5	7/26/2019	2.6 U		3.6	12 J
DUT J1	5-10	7/26/2019	1.2 J		9.2	35
DUT J1	10-15	7/26/2019	3.9 J		25	61
DUT J2	0-5	7/26/2019	1.3 J		2.1 J	7 J
DUT J2	5-10	7/26/2019	1.2 J		2.9	11 J
DUT J2	10-15	7/26/2019	1.8 J		23	50
DUT J3	0-5	7/26/2019	1.9 J		2.4	10 J
DUT J3	5-10	7/26/2019	2.3 U		3.9	14 J
DUT J3	10-15	7/26/2019	2.4 J		13	33
DUT J4	0-5	7/29/2019	5.6 J		7.4	27
DUT J4	5-10	7/29/2019	2.1 J		6.9	20 J
DUT J4	10-15	7/29/2019	2 J		5.9	16 J
DUT J5	0-5	7/29/2019	2.3 U		4.2	17 J
DUT J5	5-10	7/29/2019	2.4 U		14	33
DUT J5	10-15	7/29/2019	2.5 U		11	27
DUT K1	0-5	7/29/2019	1.5 J		4.4	27
DUT K1	5-10	7/29/2019	2.1 J		8.6	24
DUT K1	10-15	7/29/2019	1.4 J		17	39
DUT K2	0-5	7/29/2019	3.2 J		3	8.8 J
DUT K2	5-10	7/29/2019	2.5 U		8.2	20 J
DUT K2	10-15	7/29/2019	5.5 J		9.8	21 J
DUT K3	0-5	7/29/2019	2.2 U		2.6	10 J
DUT K3	5-10	7/29/2019	2.6 U		11	27
DUT K3	10-15	7/29/2019	1.8 J		5.8	16 J
DUT K4	0-5	7/29/2019	2.2 U		2.4	6.7 J
DUT K4	5-10	7/29/2019	2.6 U		2.9	8.1 J
DUT K4	10-15	7/29/2019	23		15	30
DUT K5	0-5	7/30/2019	15 J		2.6	14 J
DUT K5	5-10	7/30/2019	18		12	37
DUT K5	10-15	7/30/2019	1.3 J		15	41

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 7
DUTRA TOTAL PETROLEUM HYDROCARBON RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Chemical	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics
			CC	100	100
		Units	mg/kg	mg/kg	mg/kg
DUT L1	0-5	7/30/2019	3.8 J	3.1	17 J
DUT L1	5-10	7/30/2019	2.8 J	7.5	25
DUT L1	10-15	7/30/2019	6 J	14	38
DUT L2	0-5	7/30/2019	2.4 U	4.6	15 J
DUT L2	5-10	7/30/2019	5.7 J	8.3	28
DUT L2	10-15	7/30/2019	6.3 J	12	34
DUT L3	0-5	7/30/2019	2.4 U	7.4	24
DUT L3	5-10	7/30/2019	16 J	13	37
DUT L3	10-15	7/30/2019	2.6 U	8.6	24 J
DUT L4	0-5	7/30/2019	24 J	5.4	18 J
DUT L4	5-10	7/30/2019	1.6 J	2.2	5.9 J
DUT L4	10-15	7/30/2019	2.7 U	12	30
DUT L5	0-5	7/31/2019	66 J-	13	48
DUT L5	5-10	7/31/2019	18 J-	4	15 J
DUT L5	10-15	7/31/2019	6.3 J	11	26

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

mg/kg: milligrams per kilogram

U: Not Detected above the LOD

J: Estimated Value

X: Rejected due to significant QC issues

TABLE 8
DUTRA pH RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	pH
			CC	< 6.5 or > 8.5
			Units	su
DUT A1	0-5	7/17/2019	7.4	
DUT A1	5-10	7/17/2019	6.5	
DUT A1	10-15	7/17/2019	6.1	
DUT A2	0-5	7/17/2019	7.6	
DUT A2	5-10	7/17/2019	7	
DUT A2	10-15	7/17/2019	7	
DUT A3	0-5	7/17/2019	7.5	
DUT A3	5-10	7/17/2019	6.1	
DUT A3	10-15	7/17/2019	6.8	
DUT A4	0-5	7/17/2019	6.8	
DUT A4	5-10	7/17/2019	6.7	
DUT A4	10-15	7/17/2019	6	
DUT B1	0-5	7/17/2019	6.5	
DUT B1	5-10	7/17/2019	6.2	
DUT B1	10-15	7/17/2019	5.6	
DUT B2	0-5	7/17/2019	6.4	
DUT B2	5-10	7/17/2019	6	
DUT B2	10-15	7/17/2019	5.9	
DUT B3	0-5	7/18/2019	6.6	
DUT B3	5-10	7/18/2019	6.5	
DUT B3	10-15	7/18/2019	6.4	
DUT B4	0-5	7/18/2019	7.1	
DUT B4	5-10	7/18/2019	6.6	
DUT B4	10-15	7/18/2019	5.9	
DUT B5	0-5	7/18/2019	6.5	
DUT B5	5-10	7/18/2019	6.5	
DUT B5	10-15	7/18/2019	6.4	
DUT C1	0-5	7/18/2019	6.5	
DUT C1	5-10	7/18/2019	6	
DUT C1	10-15	7/18/2019	5.9	
DUT C2	0-5	7/18/2019	6.6	
DUT C2	5-10	7/18/2019	6.3	
DUT C2	10-15	7/18/2019	6	
DUT C3	0-5	7/19/2019	6.9	
DUT C3	5-10	7/19/2019	6.6	
DUT C3	10-15	7/19/2019	6	
DUT C4	0-5	7/19/2019	6.4	
DUT C4	5-10	7/19/2019	6	
DUT C4	10-15	7/19/2019	6.5	
DUT C5	0-5	7/19/2019	6.8	
DUT C5	5-10	7/19/2019	5.6	
DUT C5	10-15	7/19/2019	6.2	
DUT D1	0-5	7/19/2019	6.4	
DUT D1	5-10	7/19/2019	6.6	
DUT D1	10-15	7/19/2019	6.3	
DUT D2	0-5	7/19/2019	7.2	
DUT D2	5-10	7/19/2019	6.7	
DUT D2	10-15	7/19/2019	6.1	
DUT D3	0-5	7/19/2019	6.8	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

su - Standard Units

TABLE 8
DUTRA pH RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	pH
			CC	< 6.5 or > 8.5
			Units	su
DUT D3	5-10	7/19/2019	6.6	
DUT D3	10-15	7/19/2019	6	
DUT D4	0-5	7/22/2019	7.2	
DUT D4	5-10	7/22/2019	6.2	
DUT D4	10-15	7/22/2019	6.5	
DUT D5	0-5	7/22/2019	7.1	
DUT D5	5-10	7/22/2019	5.6	
DUT D5	10-15	7/22/2019	6.4	
DUT E1	0-5	7/31/2019	6.3	
DUT E1	5-10	7/31/2019	5.6	
DUT E1	10-15	7/31/2019	5.7	
DUT E2	0-5	7/31/2019	6.6	
DUT E2	5-10	7/31/2019	5.7	
DUT E2	10-15	7/31/2019	6.2	
DUT E3	0-5	7/22/2019	6.7	
DUT E3	5-10	7/22/2019	6.2	
DUT E3	10-15	7/22/2019	6.4	
DUT E4	0-5	7/22/2019	6.9	
DUT E4	5-10	7/22/2019	6.5	
DUT E4	10-15	7/22/2019	6.3	
DUT E5	0-5	7/23/2019	6.9	
DUT E5	5-10	7/23/2019	6.1	
DUT E5	10-15	7/23/2019	6.4	
DUT F1	0-5	7/23/2019	7.1	
DUT F1	5-10	7/23/2019	6.9	
DUT F1	10-15	7/23/2019	6.3	
DUT F2	0-5	7/23/2019	7.3	
DUT F2	5-10	7/23/2019	6	
DUT F2	10-15	7/23/2019	6.7	
DUT F3	0-5	7/23/2019	6.7	
DUT F3	5-10	7/23/2019	6.5	
DUT F3	10-15	7/23/2019	6.2	
DUT F4	0-5	7/23/2019	7.2	
DUT F4	5-10	7/23/2019	6.9	
DUT F4	10-15	7/23/2019	6.6	
DUT F5	0-5	7/23/2019	7.2	
DUT F5	5-10	7/23/2019	7	
DUT F5	10-15	7/23/2019	6.7	
DUT G1	0-5	7/23/2019	7	
DUT G1	5-10	7/23/2019	6	
DUT G1	10-15	7/23/2019	6.2	
DUT G2	0-5	7/24/2019	7.1	
DUT G2	5-10	7/24/2019	6.9	
DUT G2	10-15	7/24/2019	6.1	
DUT G3	0-5	7/24/2019	7	
DUT G3	5-10	7/24/2019	5.7	
DUT G3	10-15	7/24/2019	6.1	
DUT G4	0-5	7/24/2019	7.4	
DUT G4	5-10	7/24/2019	6.1	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

su - Standard Units

TABLE 8
DUTRA pH RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	pH
			CC	< 6.5 or > 8.5
			Units	su
DUT G4	10-15	7/24/2019		6
DUT G5	0-5	7/24/2019		6.8
DUT G5	5-10	7/24/2019		5.9
DUT G5	10-15	7/24/2019		6
DUT H1	0-5	7/24/2019		6.1
DUT H1	5-10	7/24/2019		6.4
DUT H1	10-15	7/24/2019		5.9
DUT H2	0-5	7/24/2019		7.9
DUT H2	5-10	7/24/2019		6.1
DUT H2	10-15	7/24/2019		6.2
DUT H3	0-5	7/25/2019		6.8
DUT H3	5-10	7/25/2019		6.1
DUT H3	10-15	7/25/2019		5.8
DUT H4	0-5	7/25/2019		6.2
DUT H4	5-10	7/25/2019		7
DUT H4	10-15	7/25/2019		6.4
DUT H5	0-5	7/25/2019		6.9
DUT H5	5-10	7/25/2019		6.4
DUT H5	10-15	7/25/2019		6.1
DUT I1	0-5	7/25/2019		6.7
DUT I1	5-10	7/25/2019		5.9
DUT I1	10-15	7/25/2019		5.7
DUT I2	0-5	7/25/2019		7.6
DUT I2	5-10	7/25/2019		5.8
DUT I2	10-15	7/25/2019		5.9
DUT I3	0-5	7/25/2019		6.1
DUT I3	5-10	7/25/2019		6.2
DUT I3	10-15	7/25/2019		6.2
DUT I4	0-5	7/26/2019		5.4
DUT I4	5-10	7/26/2019		6.2
DUT I4	10-15	7/26/2019		6.3
DUT I5	0-5	7/26/2019		8
DUT I5	5-10	7/26/2019		6.6
DUT I5	10-15	7/26/2019		6.3
DUT J1	0-5	7/26/2019		7.3
DUT J1	5-10	7/26/2019		6.4
DUT J1	10-15	7/26/2019		5.9
DUT J2	0-5	7/26/2019		6.9
DUT J2	5-10	7/26/2019		6.7
DUT J2	10-15	7/26/2019		6
DUT J3	0-5	7/26/2019		7.2
DUT J3	5-10	7/26/2019		6.6
DUT J3	10-15	7/26/2019		6.4
DUT J4	0-5	7/29/2019		5.9
DUT J4	5-10	7/29/2019		6.1
DUT J4	10-15	7/29/2019		6.2
DUT J5	0-5	7/29/2019		6.9
DUT J5	5-10	7/29/2019		6.3
DUT J5	10-15	7/29/2019		6.1

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

su - Standard Units

TABLE 8
DUTRA pH RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	Chemical	pH
			CC	< 6.5 or > 8.5
			Units	su
DUT K1	0-5	7/29/2019	6.8	
DUT K1	5-10	7/29/2019	5.8	
DUT K1	10-15	7/29/2019	5.8	
DUT K2	0-5	7/29/2019	7.3	
DUT K2	5-10	7/29/2019	6.2	
DUT K2	10-15	7/29/2019	6.1	
DUT K3	0-5	7/29/2019	7	
DUT K3	5-10	7/29/2019	6.1	
DUT K3	10-15	7/29/2019	6.2	
DUT K4	0-5	7/29/2019	7.6	
DUT K4	5-10	7/29/2019	6.5	
DUT K4	10-15	7/29/2019	5.9	
DUT K5	0-5	7/30/2019	7.9	
DUT K5	5-10	7/30/2019	6.2	
DUT K5	10-15	7/30/2019	6.1	
DUT L1	0-5	7/30/2019	6.9	
DUT L1	5-10	7/30/2019	5.9	
DUT L1	10-15	7/30/2019	5.9	
DUT L2	0-5	7/30/2019	6.7	
DUT L2	5-10	7/30/2019	5.9	
DUT L2	10-15	7/30/2019	6.1	
DUT L3	0-5	7/30/2019	5.8	
DUT L3	5-10	7/30/2019	5.8	
DUT L3	10-15	7/30/2019	6.1	
DUT L4	0-5	7/30/2019	6.6	
DUT L4	5-10	7/30/2019	6.3	
DUT L4	10-15	7/30/2019	6	
DUT L5	0-5	7/31/2019	6.2	
DUT L5	5-10	7/31/2019	6.4	
DUT L5	10-15	7/31/2019	6	

CC - Comparison Criterion, HPNS Parcel E RD, Aug 2014

Green - Result exceeds the HPNS CC

su - Standard Units

TABLE 9
DUTRA ASBESTOS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	CC	Asbestos Type	Amount of Asbestos	Non-Asbestos Nonfibrous Amount	Non-Asbestos Fibrous Amount
DUT A1	0-5	07/17/2019	0.25%	None	0.00%	100%	0
DUT A1	5-10	07/17/2019	0.25%	None	0.00%	100%	0
DUT A1	10-15	07/17/2019	0.25%	None	0.00%	100%	0
DUT A2	0-5	07/17/2019	0.25%	Chrysotile	0.25 %	99.7%	0
DUT A2	5-10	07/17/2019	0.25%	None	0.00%	100%	0
DUT A2	10-15	07/17/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT A3	0-5	07/17/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT A3	5-10	07/17/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT A3	10-15	07/17/2019	0.25%	Chrysotile	0.25 %	99.7%	0
DUT A4	0-5	07/17/2019	0.25%	None	0.00%	100%	0
DUT A4	5-10	07/17/2019	0.25%	None	0.00%	100%	0
DUT A4	10-15	07/17/2019	0.25%	None	0.00%	100%	0
DUT B1	0-5	07/17/2019	0.25%	None	0.00%	100%	0
DUT B1	5-10	07/17/2019	0.25%	None	0.00%	100%	0
DUT B1	10-15	07/17/2019	0.25%	None	0.00%	100%	0
DUT B2	0-5	07/17/2019	0.25%	None	0.00%	100%	0
DUT B2	5-10	07/17/2019	0.25%	None	0.00%	100%	0
DUT B2	10-15	07/17/2019	0.25%	None	0.00%	100%	0
DUT B3	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT B3	5-10	07/18/2019	0.25%	None	0.00%	100%	0
DUT B3	10-15	07/18/2019	0.25%	None	0.00%	100%	0
DUT B4	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT B4	5-10	07/18/2019	0.25%	None	0.00%	100%	0
DUT B4	10-15	07/18/2019	0.25%	None	0.00%	100%	0
DUT B5	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT B5	5-10	07/18/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT B5	10-15	07/18/2019	0.25%	None	0.00%	100%	0
DUT C1	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT C1	5-10	07/18/2019	0.25%	None	0.00%	100%	0
DUT C1	10-15	07/18/2019	0.25%	None	0.00%	100%	0
DUT C2	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT C2	5-10	07/18/2019	0.25%	None	0.00%	100%	0
DUT C2	10-15	07/18/2019	0.25%	None	0.00%	100%	0
DUT C3	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT C3	5-10	07/18/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT C3	10-15	07/18/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT C4	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT C4	5-10	07/18/2019	0.25%	None	0.00%	100%	0
DUT C5	0-5	07/18/2019	0.25%	None	0.00%	100%	0
DUT C5	5-10	07/18/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT C5	10-15	07/18/2019	0.25%	None	0.00%	100%	0
DUT D1	0-5	07/19/2019	0.25%	None	0.00%	100%	0
DUT D1	5-10	07/19/2019	0.25%	None	0.00%	100%	0
DUT D1	10-15	07/19/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT D2	10-15	07/19/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT D2	0-5	07/19/2019	0.25%	None	0.00%	100%	0
DUT D2	5-10	07/19/2019	0.25%	None	0.00%	100%	0
DUT D3	0-5	07/19/2019	0.25%	None	0.00%	100%	0
DUT D3	5-10	07/19/2019	0.25%	None	0.00%	100%	0
DUT D3	10-15	07/19/2019	0.25%	None	0.00%	100%	0
DUT D4	0-5	07/22/2019	0.25%	None	0.00%	100%	0
DUT D4	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT D4	10-15	07/22/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT D5	0-5	07/22/2019	0.25%	None	0.00%	100%	0
DUT D5	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT D5	10-15	07/22/2019	0.25%	None	0.00%	100%	0
DUT E1	0-5	07/22/2019	0.25%	None	0.00%	100%	0
DUT E1	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT E1	10-15	07/22/2019	0.25%	Chrysotile	< 0.25%	100%	0

TABLE 9
DUTRA ASBESTOS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	CC	Asbestos Type	Amount of Asbestos	Non-Asbestos Nonfibrous Amount	Non-Asbestos Fibrous Amount
DUT E2	0-5	07/22/2019	0.25%	Chrysotile	0.5 %	99.5%	0
DUT E2	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT E2	10-15	07/22/2019	0.25%	None	0.00%	100%	0
DUT E3	0-5	07/22/2019	0.25%	None	0.00%	100%	0
DUT E3	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT E3	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT E4	0-5	07/22/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT E4	5-10	07/22/2019	0.25%	None	0.00%	100%	0
DUT E4	10-15	07/22/2019	0.25%	None	0.00%	100%	0
DUT E5	0-5	07/23/2019	0.25%	None	0.00%	100%	0
DUT E5	5-10	07/23/2019	0.25%	None	0.00%	100%	0
DUT E5	10-15	07/23/2019	0.25%	None	0.00%	100%	0
DUT F1	0-5	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F1	5-10	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F1	10-15	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F2	0-5	07/23/2019	0.25%	None	0.00%	100%	0
DUT F2	5-10	07/23/2019	0.25%	None	0.00%	100%	0
DUT F2	10-15	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F3	0-5	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F3	5-10	07/23/2019	0.25%	None	0.00%	100%	0
DUT F3	10-15	07/23/2019	0.25%	None	0.00%	100%	0
DUT F4	0-5	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F4	5-10	07/23/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT F4	10-15	07/23/2019	0.25%	None	0.00%	100%	0
DUT F5	0-5	07/23/2019	0.25%	None	0.00%	100%	0
DUT F5	5-10	07/23/2019	0.25%	None	0.00%	100%	0
DUT F5	10-15	07/23/2019	0.25%	None	0.00%	100%	0
DUT G1	0-5	07/23/2019	0.25%	None	0.00%	100%	0
DUT G1	5-10	07/23/2019	0.25%	None	0.00%	100%	0
DUT G1	10-15	07/23/2019	0.25%	None	0.00%	100%	0
DUT G2	0-5	07/24/2019	0.25%	None	0.00%	100%	0
DUT G2	5-10	07/24/2019	0.25%	None	0.00%	100%	0
DUT G2	10-15	07/24/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT G3	0-5	07/24/2019	0.25%	None	0.00%	100%	0
DUT G3	5-10	07/24/2019	0.25%	None	0.00%	100%	0
DUT G3	10-15	07/24/2019	0.25%	None	0.00%	100%	0
DUT G4	0-5	07/24/2019	0.25%	None	0.00%	100%	0
DUT G4	5-10	07/24/2019	0.25%	None	0.00%	100%	0
DUT G4	10-15	07/24/2019	0.25%	None	0.00%	100%	0
DUT G5	0-5	07/24/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT G5	5-10	07/24/2019	0.25%	None	0.00%	100%	0
DUT G5	10-15	07/24/2019	0.25%	None	0.00%	100%	0
DUT H1	0-5	07/24/2019	0.25%	None	0.00%	100%	0
DUT H1	5-10	07/24/2019	0.25%	None	0.00%	100%	0
DUT H1	10-15	07/24/2019	0.25%	None	0.00%	100%	0
DUT H2	0-5	07/24/2019	0.25%	None	0.00%	100%	0
DUT H2	5-10	07/24/2019	0.25%	None	0.00%	100%	0
DUT H2	10-15	07/24/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT H3	0-5	07/25/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT H3	5-10	07/25/2019	0.25%	None	0.00%	100%	0
DUT H3	10-15	07/25/2019	0.25%	None	0.00%	100%	0
DUT H4	0-5	07/25/2019	0.25%	None	0.00%	100%	0
DUT H4	5-10	07/25/2019	0.25%	None	0.00%	100%	0
DUT H4	10-15	07/25/2019	0.25%	None	0.00%	100%	0
DUT H5	0-5	07/25/2019	0.25%	None	0.00%	100%	0
DUT H5	5-10	07/25/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT H5	10-15	07/25/2019	0.25%	None	0.00%	100%	0
DUT I1	0-5	07/25/2019	0.25%	None	0.00%	100%	0
DUT I1	5-10	07/25/2019	0.25%	None	0.00%	100%	0

TABLE 9
DUTRA ASBESTOS RESULTS
IMPORTED SOIL SAMPLE ASSESSMENT - DATA PACKAGE #2
PARCEL E2, PHASE 3 REMEDIAL ACTION
HUNTERS POINT NAVAL SHIPYARD (HPNS), SAN FRANCISCO, CA

Location ID	Depth (Feet)	Date	CC	Asbestos Type	Amount of Asbestos	Non-Asbestos Nonfibrous Amount	Non-Asbestos Fibrous Amount
DUT I1	10-15	07/25/2019	0.25%	None	0.00%	100%	0
DUT I2	0-5	07/25/2019	0.25%	None	0.00%	100%	0
DUT I2	5-10	07/25/2019	0.25%	None	0.00%	100%	0
DUT I2	10-15	07/25/2019	0.25%	None	0.00%	100%	0
DUT I3	0-5	07/25/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT I3	5-10	07/25/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT I3	10-15	07/25/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT I4	0-5	07/26/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT I4	5-10	07/26/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT I4	10-15	07/26/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT I5	0-5	07/26/2019	0.25%	None	0.00%	100%	0
DUT I5	5-10	07/26/2019	0.25%	Chrysotile	0.75 %	99.2%	0
DUT I5	10-15	07/26/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT J1	0-5	07/26/2019	0.25%	None	0.00%	100%	0
DUT J1	5-10	07/26/2019	0.25%	None	0.00%	100%	0
DUT J1	10-15	07/26/2019	0.25%	None	0.00%	100%	0
DUT J2	0-5	07/26/2019	0.25%	None	0.00%	100%	0
DUT J2	5-10	07/26/2019	0.25%	None	0.00%	100%	0
DUT J2	10-15	07/26/2019	0.25%	Chrysotile	< 0.25%	100%	0
DUT J3	0-5	07/26/2019	0.25%	None	0.00%	100%	0
DUT J3	5-10	07/26/2019	0.25%	None	0.00%	100%	0
DUT J3	10-15	07/26/2019	0.25%	None	0.00%	100%	0
DUT J4	0-5	07/29/2019	0.25%	None	0.00%	100%	0
DUT J4	5-10	07/29/2019	0.25%	None	0.00%	100%	0
DUT J4	10-15	07/29/2019	0.25%	None	0.00%	100%	0
DUT J5	0-5	07/29/2019	0.25%	None	0.00%	100%	0
DUT J5	5-10	07/29/2019	0.25%	None	0.00%	100%	0
DUT J5	10-15	07/29/2019	0.25%	None	0.00%	100%	0
DUT K1	0-5	07/29/2019	0.25%	None	0.00%	100%	0
DUT K1	5-10	07/29/2019	0.25%	None	0.00%	100%	0
DUT K1	10-15	07/29/2019	0.25%	None	0.00%	100%	0
DUT K2	0-5	07/29/2019	0.25%	None	0.00%	100%	0
DUT K2	5-10	07/29/2019	0.25%	None	0.00%	100%	0
DUT K2	10-15	07/29/2019	0.25%	None	0.00%	100%	0
DUT K3	0-5	07/29/2019	0.25%	None	0.00%	100%	0
DUT K3	5-10	07/29/2019	0.25%	None	0.00%	100%	0
DUT K3	10-15	07/29/2019	0.25%	None	0.00%	100%	0
DUT K4	0-5	07/29/2019	0.25%	None	0.00%	100%	0
DUT K4	5-10	07/29/2019	0.25%	None	0.00%	100%	0
DUT K4	10-15	07/29/2019	0.25%	None	0.00%	100%	0
DUT K5	0-5	07/30/2019	0.25%	None	0.00%	100%	0
DUT K5	5-10	07/30/2019	0.25%	None	0.00%	100%	0
DUT K5	10-15	07/30/2019	0.25%	None	0.00%	100%	0
DUT L1	0-5	07/30/2019	0.25%	None	0.00%	100%	0
DUT L1	5-10	07/30/2019	0.25%	None	0.00%	100%	0
DUT L1	10-15	07/30/2019	0.25%	None	0.00%	100%	0
DUT L2	0-5	07/30/2019	0.25%	None	0.00%	100%	0
DUT L2	5-10	07/30/2019	0.25%	None	0.00%	100%	0
DUT L2	10-15	07/30/2019	0.25%	None	0.00%	100%	0
DUT L3	0-5	07/30/2019	0.25%	None	0.00%	100%	0
DUT L3	5-10	07/30/2019	0.25%	None	0.00%	100%	0
DUT L3	10-15	07/30/2019	0.25%	None	0.00%	100%	0
DUT L4	0-5	07/30/2019	0.25%	None	0.00%	100%	0
DUT L4	5-10	07/30/2019	0.25%	None	0.00%	100%	0
DUT L4	10-15	07/30/2019	0.25%	None	0.00%	100%	0
DUT L5	0-5	07/31/2019	0.25%	None	0.00%	100%	0
DUT L5	5-10	07/31/2019	0.25%	None	0.00%	100%	0
DUT L5	10-15	07/31/2019	0.25%	None	0.00%	100%	0